STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

BOARD ORDER

IN THE MATTER OF

SADDLEBACK RIDGE WIND, LLC	) SITE LOCATION OF DEVELOPMENT ACT
Carthage, Canton and Dixfield	) NATURAL RESOURCES PROTECTION ACT
Franklin and Oxford Counties	) FRESHWATER WETLAND ALTERATION
SADDLEBACK RIDGE WIND PROJECT	) WATER QUALITY CERTIFICATION
	) FINDINGS OF FACT AND ORDER ISSUED
L-25137-24-H-N (approval)	) PURSUANT TO A REMAND ORDERED BY
L-25137-TG-I-N (approval)	) THE LAW COURT ON March 5, 2013

Pursuant to the provisions of 38 M.R.S. §§341-D(4); 480-A et seq.; and 481et seq.; 35-A M.R.S. §§3401-3457; and Section 401 of the Federal Water Pollution Control Act, the Board of Environmental Protection (Board) has considered the application of SADDLEBACK RIDGE WIND, LLC with the supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROCEDURAL HISTORY:

On October 6, 2011, the Department issued a Site Location of Development Act Permit (Site Law) and a Natural Resources Protection Act (NRPA) Permit for the Saddleback Ridge Wind Project proposed to be located in Carthage, Canton and Dixfield. The permit granted approval with conditions for a 33 megawatt (MW) wind energy generation facility consisting of 12 GE 2.75-103 turbines and associated facilities. The licensing decision was subsequently appealed to the Board by Friends of Maine's Mountains (FOMM), Friends of Saddleback Mountain (FOSM) and Rand Stowell. The appellants challenged, among other things, the Department's findings and conclusions regarding the project's compliance with the Department's rules pertaining to sound levels in Chapter 375, No Adverse Environmental Effect Standard of the Site Location Law.

In Board Order #L-25137-24-A-Z/L-25137-TG-B-Z, dated February 18, 2012, the Board denied the appeal and affirmed the Department's approval of the application, including a nighttime sound level limit of 45 dBA at protected locations. FOMM, FOSM, and several individuals (appellants) appealed the Board's decision to the Maine Law Court.

The Law Court, in *Friends of Maine's Mountains v. Board of Environmental Protection*, 2013 ME 25, dated March 5, 2013, vacated the Board's order related to nighttime sound requirements and remanded the matter for further review using the 42 dBA nighttime sound level limit for protected locations set forth in Chapter 375 §10(I)(2)(b), which was the provisionally adopted rule of the Board at the time of the Board's decision on the appeal.

On April 9, 2013, Saddleback Ridge Wind, LLC (applicant) submitted a "Noise Impact Study for Saddleback Ridge Wind Farm" dated April 2013 in response to the Court's decision.

In a letter dated April 23, 2013, the applicant commented on a proposed process for consideration of the project on remand from the Law Court.

In a letter dated April 29, 2013, the appellants argued that the proposed revisions to the project should be considered in the first instance by the Commissioner rather than the Board.

In a letter dated April 29, 2013, the applicant responded to the appellants' filing and argued that the matter is appropriately before the Board.

At the Board meeting in May 2, 2013, the Board heard oral argument from representatives of the applicant and the appellants regarding the procedure for consideration of this matter on remand.

In the Board's procedural order dated May 10, 2013, the Board asserted its legal authority to consider the changes to the project proposed by the applicant under its right to amend a licensing decision by the Commissioner in an appeal proceeding and in light of the instructions accompanying the Law Court's vacatur of the Board's order. The Board's procedural order outlined the process for consideration of the proposed changes to the project, including opportunity for public comment on the proposed revisions, and public comments on a draft order.

A Draft Board Order approving the project with a 42 dBA nighttime sound level limit was made available for public review and comment on August 26, 2013. Comments on the Draft Board Order were accepted by the Board until 5PM on September 17, 2013. All relevant comments were considered by the Board in the review of this Order.

2. PROJECT DESCRIPTION:

A) Summary: The proposed development consists of twelve 2.75 MW turbines with associated turbine pads; an approximately 9,090 linear foot access road leading from Winter Hill Road in Carthage to the ridgeline; an approximately 9,635 linear foot access road connecting the turbines; a 1,750 square foot operations and maintenance (O&M) building and associated transmission lines and electrical substations. The proposed project is shown on a set of plans prepared by Patriot Renewable and Engineering & Management Services, Inc. (EMS) entitled "Saddleback Ridge Wind Project" and last dated February 10, 2011. The electrical collector and transmission line systems are shown on a set of plans prepared by RLC Engineering, the first of which is titled "Exhibit 2 – Electrical Drawings," and dated October 12, 2010.

The project will create 9.4 acres of new impervious area and 10.9 acres of new developed area. The proposed Saddleback Ridge Wind Project meets the definition of an expedited wind energy development set forth in the Wind Energy Act, 35-A M.R.S. §3451(1)(4).

1) Wind Turbines: The applicant proposes to erect 12 General Electric 2.75-103 wind turbines, each of which is capable of generating 2.75 MW. The turbines will be constructed along the ridgeline of Saddleback Ridge. Each turbine is approximately 279 feet from the ground to the top of the tower; the total height from the ground to the tip of a fully extended blade is approximately 448 feet (136 meters). The applicant initially proposed to use GE 2.75-100 turbines, but noted in the original application that GE was likely to make a modified blade available for this turbine which would reduce the noise output of the turbine. In the original application the applicant stated that it expected to modify its proposal to incorporate these blades when they became available. On March 17, 2011, the applicant notified the Department of its intent to use turbines with the new blade design, the GE 2.75-103, and submitted revised application sections to reflect the impacts of the new blades.

2) Turbine Pads: The turbines will be constructed on 12 turbine pads. The developed area for each turbine pad will include an approximately 16-foot diameter turbine foundation pedestal with a surrounding 4-foot wide gravel ring, and a 50-foot by 80-foot crane pad constructed of compacted gravel or processed rock. The remaining developed area of each pad will be used as an equipment laydown area. The laydown areas will be allowed to re-vegetate; however, the turbine foundations and crane pads will remain as impervious area. The total impervious area associated with the 12 turbine pads is approximately 2.2 acres.

3) Access Roads and Crane Paths: The access road for the project will begin at the Winter Hill Road and will be approximately 9,090 linear feet and 24 feet wide. The ridgeline road between the turbine sites will be approximately 9,635 linear feet. The ridgeline road will initially be constructed as a 32-foot wide crane path to allow for the crane and other construction equipment necessary for the assembly of the turbines. As shown on the plans, the ridgeline road width will be reduced to 12 feet by either loaming and seeding the area or placing erosion control mulch over the excess road width after the construction of the turbines and the removal of the crane. The disturbed area created in the course of the construction of the access road and the ridgeline road will be approximately 29 acres. The impervious area of these roads after construction of the project will be approximately 5.7 acres.

4) Electrical Transmission Lines: Power from the 12 turbines will be collected in a 34.5 kilovolt (kV) underground collector line buried within the ridgeline access road work limits. The underground electrical collector line will transition to an aboveground transmission line on the access road approximately 900 feet down from the ridgeline road. The line will continue above ground for approximately 6,700 feet along the access road, then transition below ground for 1,340 feet along the access road and 4,000 feet along the Winter Hill Road to Maine Route 2. The line will run underground along Route 2 for approximately 200 feet, then transition aboveground and cross to the southeastern side of Route 2. From there it will run south-southeast for approximately 7 miles along a new transmission line right-of-way between 60 and 100 feet in width to a new substation tap approximately 1,000 feet from the Central

Maine Power Company (CMP) 115-kV Line 229. The applicant withdrew from the original application the CMP portion of the proposed substation off the Ludden Lane in Canton, and the approximately 1,000 feet of transmission line which will connect the substation to the existing CMP Section 229 transmission line. The applicant will develop, own, operate and maintain the access road and the collector portion of the substation pad as proposed in this application. The applicant will convey to CMP its portion of the substation pad, approximately one acre, and a right of way for the approximately 1,000-foot transmission line. CMP will independently develop its portion of the substation and the 1,000 feet of transmission line to connect the substation to Section 229.

5) Operations and Maintenance Building and Associated Structures: The proposed project will include a 1,750 square-foot O&M building with associated gravel parking area, a well, and a septic system. The O&M building will be located at the base of the access road in an existing gravel parking area for the Skye Theater off Winter Hill Road. The O&M building and parking area will result in the creation of 0.1 acre of permanent impervious area.

6) Meteorological Towers: Currently, there are two temporary meteorological towers on the project site. These towers will be removed prior to commencement of project operation.

The applicant is also seeking approval under the NRPA for impacts to freshwater wetlands and streams. The applicant proposes to permanently fill five square feet of freshwater wetlands during the construction of the access and crane roads, temporarily alter 10,883 square feet of freshwater wetlands during the construction of the transmission line, and permanently convert 41,617 square feet of forested wetlands to scrub shrub wetlands for the construction and maintenance of the electrical transmission line. The proposed transmission line will cross nine streams, which are NRPA-regulated streams. Four of these streams will be crossed by construction equipment, with the use of temporary timber mat bridges. The construction of the access road and the ridge line road will not involve any stream crossings.

The applicant submitted three NRPA Permit-by-Rule (PBR) notifications (PBR #51466, #51634, and #51635), two under Section 10 and one under Section 19 of the Chapter 305 Standards of the Department's regulations. The first two PBRs relate to crossings of four streams along the transmission line. The third relates to vegetation clearing in the critical terrestrial habitat of a potentially significant vernal pool. These PBRs were submitted to the Department on December 10, and accepted on December 24, 2010.

The applicant submitted a revised Noise Impact Study (NIS) for the Saddleback Ridge Wind Project on April 9, 2013.

B) Current Use of Site: The site of the proposed project is known as Saddleback Ridge, which extends to the south from Saddleback Mountain in Carthage. The site is generally

forested and has been subject to commercial forest harvesting operations. There are several existing logging roads on the site.

C) Public Interest: While the application was being reviewed, the Department received numerous comments from the general public, primarily from residents of the areas surrounding the project. These persons are "interested persons," as defined in Department Rules, Chapter 2(1)(J), for the purposes of this application review. The Department received a request for a public hearing filed by attorney Rufus Brown on behalf of FOMM and other interested persons listed in the December 10, 2010, filing. The Department denied this request in a letter dated January 21, 2011. The request focused primarily on the potential noise impacts of the proposed project and the arguments raised are discussed in Finding 6 below. As stated in the January 21 letter, the information submitted in the request had been considered in previous application proceedings; and to the extent the request included new information, the Department found that it was not sufficient to warrant a public hearing.

In consideration of the level of public interest in wind power projects, the Department held a public meeting pursuant to 38 M.R.S. §345-A (5). The purpose of this meeting was to provide interested persons and the general public with an opportunity to comment on the application and submit information into the Department's record. The Department held the public meeting on March 10, 2011 at the Dirigo High School in the Town of Dixfield, Maine. Members of the public offered comments and asked questions at the meeting. A transcript of the public meeting was prepared, and this transcript and all documents offered at the public meeting are a part of the record for this application. The Department also received numerous other letters and documents regarding specific aspects of the proposed project during the application review period.

D) Comments on the Draft Order: The Department issued a draft order on the original application for public comment on September 27, 2011. The comment period on that draft order closed on October 4, 2011. The Department's responses to comments on the draft order are discussed in the appropriate findings below.

3. TITLE, RIGHT OR INTEREST:

To demonstrate that it has sufficient title, right or interest in the property proposed for development, as required in Chapter 2(11)(D) and Chapter 372(9) of the Department's rules, the applicant submitted copies of leases, purchase options, and easement options between the applicant and the property owners of the proposed project site, including the transmission line that will be constructed on the project site. The application includes deeds which show that the property owners who are leasing to the applicant have ownership over the parcels which are subject to the leases.

On April 9, 2013, the applicant submitted evidence that it has acquired sound easements on four additional parcels and an amended easement on one of the parcels previously leased as part of the project site. The applicant also submitted deeds which show that the property

owners who are leasing to the applicant have ownership over the parcels which are subject to the leases.

The Board finds that the applicant has demonstrated sufficient title, right or interest for the area which will be occupied by the project. Prior to the start of construction, the applicant must submit evidence that all necessary options have been exercised and final deeds, leases and easements have been executed and recorded.

4. FINANCIAL CAPACITY:

The total cost of the project is estimated to be $66 million. The applicant submitted a letter from Sovereign Bank, dated September 23, 2010, stating that it has reviewed the proposed budget for the project and is "more than willing to consider providing the financing in the required amount and with the requested structure."

The Board adopts the Department's finding in its October 6, 2011 Order that the applicant has demonstrated adequate financial capacity to comply with Department standards provided that, prior to the start of construction, the applicant submits evidence that it has secured financing from Sovereign Bank or another financial institution authorized to do business in Maine, or another form of financing has been secured in accordance with 38 M.R.S. §484(1) and Chapter 373(1), to the Department for review and approval.

5. TECHNICAL ABILITY:

The applicant provided resume information for the key technical people involved with the project. The applicant retained the services of several consulting firms to assist in the design and engineering of the project. These firms and their involvement in the proposed project are as follows:

- Tetra Tech EC, Inc. (Tetra Tech) – natural resources assessment, historic archaeological resources, shadow flicker assessment, permitting assistance
- Boyle Associates – wetlands delineation
- Engineering and Management Services – stormwater management design
- RLC Engineering – electrical engineering design
- Terrence J. DeWan and Associates – visual impact analysis
- Albert Frick Associates – soils, septic, wetlands delineation
- Stockwell Environmental Consulting, Inc. – rare plant and unique natural community surveys
- RSG, Inc. – sound assessment

The Board adopts the Department's finding in its October 6, 2011 Order that, based on the applicant's experience and the professional consultants it retained to prepare the application, the applicant has demonstrated adequate technical ability to comply with Department standards.

6. NOISE:

To address the Site Law standard pertaining to the control of noise, 38 M.R.S. §484 (3), and the rules adopted thereunder, Chapter 375 §10, the applicant initially submitted a Noise Impact Study (NIS) prepared by RSG Inc., dated October 10, 2010. RSG Inc. is a firm with noise experts experienced in evaluating noise impacts from mobile and industrial sources, including wind energy projects. The NIS models expected sound levels from the proposed Saddleback Ridge Wind project and compares the model results to operational standards pursuant to Chapter 375 §10. The Department hired an independent noise expert, EnRad Consulting (EnRad), to assist the Department in its review of the evidence pertaining to noise during the initial project review.

The October 10, 2010, NIS was based on the noise output of General Electric 2.75-100 wind turbines as originally proposed. As described above, the applicant amended its proposal and is now proposing the use of the new turbine/blade configuration identified as the General Electric 2.75-103. The applicant submitted a revised NIS dated March 17, 2011, that models the noise output from the General Electric 2.75-103. According to the revised study, the modified turbines reduced the sound power output of the turbines sufficiently to reduce the number of turbines required to be operated in Noise Reduction Operation (NRO) to maintain compliance with the Department's nighttime noise standard. The October 10, 2010, study based on the GE 2.75-100 turbine recommended that turbines 6 through 10 be operated in NRO to achieve compliance with the nighttime standard of 45 dBA. The March 17, 2011 study, based on the GE 2.75-103, recommended that only turbines 8 and 9 be operated in NRO during the nighttime hours to achieve compliance with the nighttime standard.

The Saddleback Ridge Wind project was designed to comply with Department regulations applicable to sound levels from construction, routine operation and routine maintenance. Chapter 375 §10 applies hourly sound level limits ($L_{Aeq\text{-}Hr}$) at facility property boundaries and at nearby protected locations. Chapter 375 §10 (G)(16) defines a protected location as "any location accessible by foot, on a parcel of land containing a residence or approved subdivision...." In addition to residential parcels, protected locations include but are not limited to schools, state parks, and designated wilderness areas. For the proposed project, the nearest protected location is approximately 3,168 feet from a turbine.

Based on evidence received at a hearing in response to a petition to amend the noise regulation at 2 CMR 06-096 Chapter 375 §10, on September 15, 2011, the Board provisionally adopted changes to the nighttime noise limit for wind energy projects, lowering the allowed limit from 45 dBA to 42 dBA. After legislative approval, the new limit went into effect on June 10, 2012. In making the determination that the lower limit was appropriate, the Board affirmed that compliance with the new rule is likely to ensure that there are no adverse health effects due to the proposed project.

The March 5, 2013, ruling by the Law Court requires that the project meet the newer nighttime limit of 42 dBA established in Chapter 375 §10(I)(2)(b) at all protected locations. As outlined in Chapter 375 §10(I)(2), the sound level resulting from routine operation of a wind energy development is limited to 75 decibels (dBA) at any time of day at any development property boundary. At any protected location, the limit is 55 dBA between 7:00

a.m. and 7:00 p.m., and 42 dBA between 7:00 p.m. and 7:00 a.m.

In response to the March 5, 2013 Law Court ruling, the applicant submitted a new NIS for the project on April 9, 2013, prepared by RSG, and dated April 2013. The new NIS includes easements on four additional parcels and an enhanced easement on one parcel previously leased as part of the project site. The easements allow Saddleback Mountain Wind to exceed noise limits at protected locations on the parcels as provided in Chapter 375 §10(C)(5)(s). The applicant also submitted deeds which show that the property owners who are leasing to the applicant have ownership over the parcels which are subject to the leases.

A) Sound Level Modeling. The applicant's noise consultant, RSG, developed a sound level prediction model to estimate sound levels from operation of the proposed project. The acoustic model was developed using the CADNA/A software program, performing calculations in accordance with a generally recognized standard for estimating the propagation of sound in the environment which is published by the International Standards Organization (ISO) as Chapter 9613.2, Attenuation of Sound During Propagation Outdoors. CADNA/A uses three dimensional terrain, proposed wind turbine characteristics and locations, plus environmental factors to calculate outdoor sound propagation from the wind turbines. RSG used area topography and wind turbine locations based on USGS topographic information and project design for entry into the CADNA/A model.

B) In the April 9, 2013 NIS, RSG calculated sound levels for simultaneous operation of twelve GE 2.75-103 wind turbines at the proposed turbine locations. RSG's modeling assumptions include: all wind turbines operating at maximum sound power levels concurrently, omni-directional downwind propagation, ground absorption factor of G=0.5 (to represent mixed ground), no sound absorption from foliage or vegetation, and turbine manufacturer's specifications for maximum sound power level (105.0 dBA) plus a 2 dBA uncertainty factor as recommended by the International Electrotechnical Commission Standard IEC 61400-11. Another 1.0 dBA uncertainty factor was added in accordance with the guidelines in Chapter 375 §10(I)(7)(c)(9).

   The applicant proposes to operate the turbines at full sound power output at all times.

   The applicant modeled sound levels from wind turbine operation in the area surrounding the proposed project site. Thirty-four residences and eleven locations approximately 500 feet away from residences in the vicinity of the proposed project were modeled for sound levels predicted to result from operation of the project. The April 9, 2013 NIS states that the highest sound pressure level within 500 feet of a non-participating residence is 40.3 dBA at Receiver 12, and that the sound pressure level at that residence is 40 dBA.

C) Short Duration Repetitive Sound (SDRS). Chapter 375 §10(I)(4) defines short duration repetitive sound as "a sequence of repetitive sounds that occur within a 10-minute measurement interval, each clearly discernible as an event resulting from the development and causing an increase in the sound level of 5 dBA or greater on the fast meter response above the sound level observed immediately before and after the event,

each typically ±1 second in duration, and which are inherent to the process or operation of the development." Chapter 375 requires that when routine operation of a wind energy development produces short duration repetitive sound, a 5 dBA penalty shall be arithmetically added to each average 10-minute sound level ($L_{eqA\ 10\text{-}min}$) measurement interval in which greater than 5 SDRS events are present.

In the April 9, 2013 NIS submitted by the applicant, RSG observed that while the cause of SDRS is debated, it is likely a function of the different wind speeds at the top and bottom of the rotor (wind shear) and turbulence. RSG stated that it reviewed a year of meteorological data collected from the project site. It found that instances of high wind shear occur approximately 2% of the time for all hours. It also found that 76% of the data points are below 0.20 turbulence intensity, with most of those periods above this figure occurring during the day, and that turbulence intensity is highest at the lowest wind speeds when sound output from the turbines is lower. Based on this, RSG concluded that, while it is not possible at this time to calculate the extent of SDRS from the proposed project, its analysis indicates that the project site characteristics are not conducive to common occurrences of SDRS from routine turbine operation.

D) Tonal Sound. Chapter 375 §10(I)(3) states that "a tonal sound exists if, at a protected location, the 10 minute equivalent average one-third octave band sound pressure level in the band containing the tonal sound exceeds the arithmetic average of the sound pressure levels of the two contiguous one-third octave bands by 5 dB for center frequencies at or between 500 Hz and 10,000 Hz, by 8 dB for center frequencies at or between 160 and 400 Hz, and by 15 dB for center frequencies at or between 25 Hz and 125 Hz." Chapter 375 requires that for compliance determinations, "5 dBA shall be added to any average 10 minute sound level ($L_{eqA\ 10\text{-}min}$) for which a tonal sound occurs that results from routine operation of the wind energy development."

The April 9, 2013 NIS submitted by the applicant states that the maximum tonal audibility level as measured by the IEC 61400-11 methodology is less than 4 dB, irrespective of wind speed. No one-third octave band exceeds the arithmetic average of adjacent one-third octave bands by more than 5 dB regardless of the center frequency, so the applicant's submission indicates that the proposed turbines will not produce tonal sound as defined in the Department's Rules, Chapter 375 §10(I).

E) Public Comment on the Revised NIS and Draft Board Order. The process discussed in Finding 1 above includes a period of 21 days for public review and comment on the proposed changes to the project as presented in the applicant's April 9, 2013 NIS. During the review period interested persons submitted comments and information regarding sound levels and noise impacts from the proposed project. Specifically, concerns were raised regarding the applicant's use of easements to remove protected location restrictions from some properties; questions regarding the accuracy of the modeled sound levels near the project site; questions regarding the need for conformance with local noise ordinances in Dixfield and Wilton; and allegations of excessive noise at other wind energy projects where the licenses were issued based upon the results of a similar modeling protocol. One interested person made inquiries into adding more

protected locations to those addressed by the applicant. FOMM filed two reports analyzing the April 9, 2013 NIS. The applicant submitted a response to the filing by FOMM, and the Department's consultant reviewed and commented on both the filing and the response.

In an email dated June 16, 2013, Mr. Norman Mitchell inquired into the legality of the applicant's use of easements on certain parcels to remove the restrictions on noise impacts that normally apply to protected locations. Chapter 375 §10(C)(5)(s) states in pertinent part that "Sounds from a regulated development received at a protected location when the generator of the sound has been conveyed a noise easement for that location" shall be exempt from regulation by the Board.

Several emails were received from Mr. Dan McKay requesting explanation of the difference between the sound contours modeled in the two NISs. The Department's consultant, Tech Environmental, was asked to respond, and stated that the "difference is caused by two changes: 1) the revisions to the Maine Noise Regulations for wind turbines that specify the modeling uncertainty factor for non-coastal locations (0-2 dBA); and 2) the switch from a Siemens to a GE turbine. The 2012 RSG report used a modeling uncertainty factor of 3 dBA that is larger than the 1 dBA value selected for the 2013 report, which is in the middle of the 0-2 dBA range listed in the revised Regulations."

Mr. Norman Mitchell, in an email dated June 18, 2013, inquired as to the applicability of the noise standards in the local ordinances for the Towns of Dixfield and Wilton. The Town of Wilton Zoning Ordinance (Section 5.18.D.5.a) requires that large wind energy systems "shall not cause audible noise in excess of 5 dBA, or low frequency noise in excess of 20 dBC, above nighttime ambient, non-operating noise levels as measured at the nearest property line." The Town of Dixfield Wind Energy Facility Ordinance (Section 11.15.2.B) states that "No [turbine] shall be located so as to generate postconstruction sound levels that exceed 42 dBA at night (8:30 p.m. to 6:00 a.m. or 55 dBA during the day (6:00 a.m. to 8:30 p.m.)". Chapter 375 §10(B)(1) states that "When a proposed development is located in a municipality which has duly enacted by ordinance an applicable quantifiable noise standard, which (1) contains limits that are not higher than the sound level limits contained in this regulation by more than 5 dBA, and (2) limits or addresses the various types of noises contained in this regulation or all the types of noises generated by the development, that local standard, rather than this regulation, shall be applied by the Board within that municipality for each of the types of sounds the ordinance regulates. This regulation applies to developments located within one municipality when the noise produced by the development is received in another municipality and, in these cases, the Board will also take into consideration the municipalities' quantifiable noise standards, if any." Carthage does not have local ordinances regulating noise levels from wind energy developments or any other sources. Noise limits imposed by the Dixfield Ordinance are the same as those imposed by Chapter 375 §10(I)(2)(b); therefore analysis of noise levels under both the Dixfield and Department standards yields the same result. The Wilton Ordinance does not contain a quantifiable noise standard consistent with the noise limits contained in the Department's noise rule, and therefore does not contain an applicable standard under the terms of

Chapter 375. The Board also notes that due to the distance between the project and the closest properties in Wilton and Dixfield, noise impacts in those municipalities will be negligible, in the range of 25-30 dBA at the closest municipal boundary. For all these reasons, consideration of local noise limits in the Dixfield and Wilton Ordinances does not impact the Board's findings with respect to the Project's compliance with noise standards.

Two emails were received from Ms. Leola R. Ballweber on June 11, 2013, alleging that the Spruce Mountain Wind Project in Woodstock, Maine, permitted under Department Order #L-24838-24-A-N/L-24838-2G-B-N, has significantly exceeded the modeled noise levels, and also exceeded the noise levels allowed in the license. However, Department records indicate that both complaint investigations and noise monitoring at Spruce Mountain have failed to reveal any violations of the noise limits allowed under the license for that project.

Ms. Alice McKay Barnett argued in several emails received during the public comment period that a recreational vehicle on her property should be considered a protected location. Chapter 375 §10(G)(16) defines a protected location as "any location, accessible by foot, on a parcel of land containing a residence or planned residence ... For purposes of this definition, (1) a residence is considered planned when the owner of the parcel of land on which the residence is to be located has received all applicable building and land use permits and the time for beginning construction under such permits has not expired...". Chapter 375 §10(G)(14) defines a residence as "A building or structure, including manufactured housing, maintained for permanent or seasonal residential occupancy providing living, cooking and sleeping facilities and having permanent indoor or outdoor sanitary facilities, excluding recreational vehicles, tents and watercraft." Ms. Barnett stated that Carthage has no local building permit requirements, so no permit exists for the structure in question. However, the state requires a permit for all subsurface wastewater disposal systems (30-A M.R.S. §4215(B)). In an email dated June 11, 2013, Ms. Barnett indicated that she had no permit for the pit privy associated with the recreational vehicle. Therefore, the Board finds that no planned residence as defined above exists on the property, and thus, the applicant is not required to meet the protected location sound level limits on that property.

In an email dated June 25, 2013, Ms. Barnett inquired as to whether the Rocky Mountain Terrain Park, a business that provides overnight camping sites among other services, could be considered a protected location. The definition of a protected location in Chapter 375 §10(G)(16) cited above also states "[t]ransient living accommodations are not generally considered protected locations; however, in certain special situations where it is determined by the Board that the health and welfare of the guests and/or the economic viability of the establishment will be unreasonably impacted, the Board may designate certain hotels, motels, campsites and duly licensed campgrounds as protected locations." Department staff examined the Rocky Mountain Terrain Park's website and found that the primary activities advertised are "trail riding in your 4x4 truck, your 4-wheeler, dune buggy, dirt bike, or mountain bike" in warm weather, and use of a "huge snow-cross track" in winter. The website also advertises plans for expanded facilities

including "a full sized motocross track, sand drags, truck and tractor pulls, hill climbs, and mini-golf." The Board finds that these activities will not be adversely affected by any noise generated by the proposed development, and that neither the health and welfare of the guests nor the economic viability of the establishment will be impacted by the construction or operation of the proposed project.

FOMM submitted a report authored by Richard R. James of E-Coustic Solutions titled "Issues regarding the April 2013 Noise Impact Study For Saddleback Ridge Wind" and dated June 28, 2013 (James report). The report incorporates comments from the same author dated December 9, 2010, which comments were addressed in Department Order #L-25137-24-A-N/L-25137-TG-B-N. The June 28, 2013 report alleges that the applicant's April 9, 2013 NIS does not meet the requirements of Chapter 375 §10(I) regarding inclusion in the predictive model of maximum sound power output of the turbines, attenuation due to ground absorption/reflection, and inclusion of a discretionary uncertainty factor of between 0 and 2 dBA. The applicant's noise consultant, RSG, responded to these allegations in a memorandum dated July 3, 2013, stating that the sound power levels used were warranteed by the manufacturer for all meteorological conditions, and therefore represent the maximum sound power output of the turbines; that the applicant's use of a ground absorption factor of 0.5 is appropriate based on its relative conservatism when compared to regulations from areas outside of Maine that specifically address this factor; and that the uncertainty factor of 1 dBA used in the model are appropriate based on compliance measurements from other wind energy projects which show that the model over-predicts sound levels by an average of 4.0 dBA. The James report also alleges that the turbine spacing for the proposed project is too close. The report states, "[i]t is generally accepted by acousticians working with wind turbines that to avoid having the wake and associated turbulence produced by one turbine become the inflow air for turbine(s) located downwind that a separation distance between turbines of at least 5 rotor diameters is required." The report further states that "[i]nspection of the figures showing the location of the wind turbines on Saddleback Ridge finds that the turbines are closely spaced with inter-turbine spacing of less than 5 rotor diameters being a frequent occurrence." RSG's July 3, 2013 memorandum states, "[n]o support is given for this assertion. Acousticians generally have no expertise in calculating the level of turbulence created by a wind turbine." RSG further stated, "[t]urbine spacing at SRW is based on site-specific topography, meteorology and other factors, and was developed based on the expertise of the project developer and wind turbine manufacturer to define acceptable turbulence limits and to site and operate the turbines accordingly. In this case, the turbine layout has been approved by GE."

FOMM also submitted a report by Stephen E. Ambrose and Robert W. Rand titled "Independent Peer Review", subtitled "Comments on the report of: Noise Impact Study for Saddleback Ridge Wind Project April 2013", dated June 28, 2013 (Ambrose/Rand report). The Ambrose/Rand report alleges that the applicant's April 9, 2013 NIS is deficient in several areas under the requirements of Chapter 375 §10(I). The applicant responded to the claims of deficiency in a letter from its attorneys, Verrill Dana LLP, to Department staff dated July 3, 2013, stating that "[t]he Law Court's remand order required the Board to apply the 42 dBA limit. Specifically, the remand order stated, 'We

vacate the Board's order and remand for further review using the 42 dBA nighttime limit introduced in 06-096 CMR 375 §10(I)(2)(b).' ... The remand order does not reference the sound rule's procedural submission requirements." The Ambrose /Rand report claims that the 42 dBA limit is not sufficiently restrictive, and that the Board should use its discretion to apply a more restrictive limit. The applicant's attorneys responded in the July 3, 2013 letter, stating that "the Law Court instructed the Board to apply the 42 dBA limit, not to consider whether yet another set of standards is appropriate." The Ambrose/Rand report also alleges that the applicant did not provide documentation demonstrating the effectiveness of GE Advanced Loads Control (ALC) technology in reducing the incidence of SDRS. ALC is a relatively new technology that allows the pitch of each blade to operate independently. In older designs, the blade pitch was optimized only for the wind speed at the turbine's hub. Using independent pitch control, each blade can react to changes in wind speed and turbulence intensity, and optimize its angle of attack to specific wind conditions, regardless of where it is in the rotor path. The applicant's attorneys responded in the July 3, 2013 letter, stating that according to the April 9, 2013 NIS, the project is not expected to result in significant SDRS, and that the use of ALC is not necessary to demonstrate compliance with the Department's 42 dBA nighttime standard. The Ambrose/Rand report echoes the James report in claiming that a larger uncertainty factor should be used in the model. The Ambrose/Rand report cites measurements from the Mars Hill wind project as a basis for requiring higher uncertainty factors. RSG responded in the July 3, 2013 memorandum, stating that "[w]hile the appellants' approach is novel, it is an 'apples to oranges' comparison and not consistent with the requirements of Chapter 375 §10, which requires site-specific parameters when preparing predictive modeling estimates of sound levels." The Ambrose/Rand report also claims that the low frequency sound generated by the project will cause building vibration and rattle at residences near the project. RSG responded in the July 3, 2013 memorandum, stating that "[w]hile the subject of low-frequency sound is important, the Law Court did not remand the application to DEP for evaluation of low frequency noise, as low frequency noise is not regulated by DEP outside of its contribution to an overall A-weighted sound level." Finally, the Ambrose/Rand report states that the NIS "[does] not explain or justify using easements as noise control which appear to waive claims for health impacts on children." The applicant responded in the July 3, 2013 letter, stating that "[e]xemption from noise limits by sound easement is specifically provided for by Chapter 375 [§](10)(C)(5)(s)."

As described in Section 1 above, a Draft Board Order was made available for public review and comment on August 26, 2013. Comments on the Draft Board Order were accepted by the Board until 5PM on September 17, 2013.

Comments were received from Mr. Michael Bond in a letter dated September 17, 2013. The letter included three comments relevant to the Board's review. Mr. Bond's comment #2 states that the GE 2.75 MW turbine has not "been correctly tested for sound impacts;" that "[a] primary factor in establishing the extent of wind turbine noise has not included sufficient analysis of wind direction" [sic]; and that "the 42 dBA sound maximums will be exceeded on a frequent level" [sic]. Mr. Bond's comment #3 states that the 2010 NIS submitted by RSG is "severely biased in favor of the project;" that "the sound level

prediction model developed by RSG is similarly biased, particularly as regards downwind propagation and the reliability of meteorological data 'collected from the project site.' There is no validation of this data from an independent source;" and that the statement by RSG that "instances of high wind shear occur approximately 2% of the time for all hours" is "completely unsubstantiated." Mr. Bond's comment #6 states that compliance testing "should be done at more than two locations." Other comments received from Mr. Bond were not relevant to the Board's review of the potential noise impacts of the proposed wind energy development.

Comments received from Ms. Peggy Lucas were not relevant to the Board's review of the potential noise impacts of the proposed wind energy development.

Comments received from FOMM included a letter from Mr. Rick James of E-Coustic Solutions dated September 17, 2013, and a letter from Mr. Stephen Ambrose and Mr. Robert Rand, also dated September 17, 2013, along with supporting documents including a letter from Mr. Ambrose to Michael Fairney, dated August 19, 2013 and a letter with attachments from Mr. Rand to Michael Fairney, also dated August 19, 2013. Earlier comments from Mr. James and Messrs. Ambrose and Rand on the revised NIS were incorporated by reference into FOMM's submissions. These earlier comments are discussed above.

Mr. James, in the September 17, 2013 letter, stated that RSG failed to properly apply known tolerances and variances to input data for the model; that RSG has a history of understating the noise impacts of wind development, resulting in complaints from the public at two projects in Vermont; that a letter from GE certifying the sound output of the GE 2.75-103 turbines is not valid; and that the turbine spacing is too close and will result in higher sound levels due to inter-turbine wake interactions.

Messrs. Ambrose and Rand, in their September 17, 2013 letter, state that RSG has a history of inaccurate predictions at other wind projects, specifically the Hoosac Wind site in Massachusetts and a second unnamed project; that an uncertainty factor of 5 dBA should be applied at Saddleback Ridge, rather than the combined 3 dBA used in the April 2013 NIS; that Tech Environmental has a history of inaccurate noise predictions at three projects in Massachusetts and one in Michigan, resulting in complaints and violations of standards at those projects; that should mitigation become necessary at Saddleback Ridge, NRO and ALC have not been shown to work at this site; and that the use of easements to exempt locations from noise regulations should not be allowed.

F) Board Review. The Department hired an independent noise expert, Tech Environmental, to assist the Board in its review of the evidence pertaining to noise. Tech Environmental reviewed the submissions from the appellants and from the applicant, and responded in a letter dated July 11, 2013. Tech Environmental also reviewed the applicant's July 3, 2013 response letter, and stated that "[t]he technical information in the RSG memo and the Verrill Dana letter provide a full reply to appellants' claims and comments. I agree with their responses."

Tech Environmental reviewed the Ambrose/Rand report and the James report and made the following statements in its July 11, 2013 letter:

> Regarding the appellants' claim that the map of property boundaries is insufficient: "The property boundaries shown on the predicted sound contour map (Figure 18) in the RSG report are sufficient for determining that the redesigned project complies with all sound limits in Chapter 375 [§](10)(I)."
>
> Regarding the appellants' claims that the April 9, 2013 NIS did not address sound impact for high wind shear conditions, that the NIS should have used larger uncertainty factors, and that a ground factor of G=0 should have been used: "The letter from GE Wind Energy confirms that the maximum sound power level of 105 dBA with an uncertainty level of 2 dBA corresponds to operations under all wind shear conditions, including high wind shear. The appellants' suggested value of G=0 for the model is inappropriate as that would treat the ground surface as an acoustic mirror, perfectly reflecting all sound energy." Tech Environmental stated that "appellants base their opinions in part on measurements from the Mars Hill project", and that "appellants' use of data from Mars Hill is inappropriate. The data were not collected using the current protocol outlined in Chapter 375 [§](10)(I)[(8)](e), and the method for processing and use of compliance measurements has changed significantly since the Mars Hill analysis was done." Tech Environmental also stated that "[t]he RSG noise impact study was done in accordance with the Department's established noise impact assessment procedures with regard to the selection of uncertainty factors and the ground factor value of G=0.5. ... In conclusion, the RSG report modeled the worst case conditions for the GE turbine in accordance with Chapter 375 [§](10)(I)."
>
> Regarding the appellants' claim that the description of ALC in the RSG NIS is deficient: "ALC is not relied upon for the compliance demonstration in the RSG report."
>
> Regarding the claim that the turbine spacing for the project is too small: "GE has offered warranties for the project, taking into account the possible wake turbulence from adjacent turbines in the planned layout."

Tech Environmental reviewed the comments on the draft Order received from FOMM, including the letters from Mr. James and from Messrs. Ambrose and Rand, as well as the relevant comments from Mr. Bond, and responded in a letter dated September 24, 2013.

Regarding Mr. Bond's comment #2 alleging incorrect testing of the proposed turbines and inadequate analysis of wind direction, Tech Environmental stated, "[t]he sound power level used by the [a]pplicant's sound consultant RSG was properly determined with the International Standard IEC 61400-11/14 test method. The sound impact analysis is omni-directional and considers that worst-case meteorological conditions for sound propagation may occur under any and all wind directions."

Regarding Mr. Bond's comment #3 alleging bias in the sound prediction model used by RSG and alleging that RSG's model is similarly biased regarding downwind propagation, Tech Environmental stated, "[t]he RSG sound production model uses International Standard ISO 9613-2 for sound propagation, and has been previously validated as accurate in sound compliance testing [at] other operating wind energy projects in Maine." Tech Environmental further stated that "[t]he meteorological data collected by RSG at the project site were not used in the acoustic model, which instead makes worst-case assumptions regarding sound propagation."

Regarding Mr. Bond's comment #6, claiming that compliance testing should be done at more than two locations, Tech Environmental stated, "[g]iven that there are very few non-participating residences ([p]rotected [l]ocations) near the proposed wind turbines, testing is only needed at the two closest such [p]rotected [l]ocations, namely receivers #12 and #29.

Regarding Mr. James' allegation that that RSG failed to properly apply tolerances and variances, Tech Environmental stated, "RSG used a sound power level of 105.0 plus an uncertainty (K) factor of +2dBA in accordance with the published uncertainty levels for the GE 2.75-MW turbine under IEC 61400-11/14 as stated in GE's Product Acoustic Specifications. RSG assumed a modeling uncertainty factor of +1 dBA in accordance with the guidelines in Chapter 375, Section 10(I)(7)(c)(9), the chosen value being in the middle of the range for inland wind projects. From my independent examination of the compliance test results for other inland Maine energy projects (Stetson, Spruce Mountain, Bull Hill), I conclude that these uncertainty factors yield conservative results for predicted maximum sound levels."

Regarding Mr. James' allegation that the turbine spacing is too close, Tech Environmental stated, "GE has offered warranties for the project, taking into account possible wake turbulence from adjacent turbines in the proposed layout."

Regarding Messrs. Ambrose and Rand's allegation that ALC has not been shown to work at this site, Tech Environmental stated, "ALC is not relied upon for the compliance demonstration in the RSG report."

The Board considered Mr. Bond's comment #6, claiming that compliance testing should be done at more than two locations. Chapter 375 §10(I)(8)(d)(1) requires compliance measurements to be taken at nearby protected locations most likely to be affected by the sound from routine operation of the project, subject to permission from the property owners. Receivers 12 and 29 have the highest modeled sound levels of the residences in the vicinity of the generating facilities according to the April, 2013 NIS, and are therefore the protected locations most likely to be affected by sound from routine operation of the project. Other comments included in Mr. Bond's letter were not relevant to the Board's review of the potential noise impacts of the project. The Board finds that testing at the two locations given will be sufficient.

The Board considered Mr. James' comments alleging that the letter from GE certifying the sound output of the 2.75-103 turbines is invalid. The letter in question repeats information found in Appendix C of the April 2013 NIS. Appendix C is a document published by GE, titled "Product Acoustic Specifications", subtitled "Normal operation according to IEC Incl. Octave Band Spectra and 1/3rd Octave Band Spectra" produced specifically for Patriot Renewables Saddleback Ridge. The certified maximum sound power output for the GE 2.75-103 turbines is given as 105.0 dBA ± 2 dBA in both documents. The Board finds that the letter in question is valid.

The Board considered Mr. James' allegations that RSG has produced unreliable NISs for projects in Vermont, resulting in complaints from the public at those sites. No corroborative evidence for these claims was provided with or referenced by Mr. James, and Mr. James does not claim that any violation of standards or exceedance of predicted sound levels occurred, only that there have been complaints. The Board finds that projects in other states not under Board or Department jurisdiction are not subject to the same requirements as projects in Maine, and are therefore not relevant to the review of the matter on remand. The Board further finds that the complaint and response protocols outlined in this Order are sufficient to address any potential exceedance of the noise limits herein.

The Board considered the assertion by Messrs. Ambrose and Rand that an uncertainty factor of 5 dBA should be applied at Saddleback Ridge, rather than the combined 3 dBA used in the April 2013 NIS. Chapter 375 §10(I)(7)(c)(8) requires the inclusion of an uncertainty factor adjustment to the maximum rated output of the sound sources "based on the manufacturer's recommendation"; and Chapter 375 §10(I)(7)(c)(9) requires inclusion of an additional uncertainty factor to account for modeling uncertainties, of from 0 to 2 dBA for inland developments, subject to the Department's discretion. Other factors to be considered in the Department's exercise of this discretion include the extent and specificity of credible evidence of meteorological operating conditions, and the extent of evaluation and/or prior specific experience for the proposed wind turbines. In the absence of any evidence of unusual meteorological operating conditions or any prior experience with the GE 2.75-103 turbines, the applicant chose to apply a 1.0 dBA modeling uncertainty factor in combination with the manufacturer's recommended 2.0 dBA uncertainty factor. The Board finds that the applicant's NIS has met the requirements in Chapter 375 §10(I)(7)(c)(8) and (9).

The Board considered the assertion by Messrs. Ambrose and Rand that the use of easements to exempt locations from noise regulations should not be allowed. Chapter 375 §10(C)(5)(s) specifically exempts from regulation sounds from a regulated development received at a protected location when the generator of the sound has been conveyed a noise easement for that location. The use of easements to convey specific land usage rights is legally valid, and in this case the particular type of easement is specifically allowed by the rule, which rule was in place during the most recent revision of Chapter 375, and which was unchallenged during that revision process. The Board finds that the applicant's use of noise easements to exempt some protected locations from

regulation of sound impacts thereto is appropriate in the Saddleback Ridge Wind project area.

The Board considered the allegation by Messrs. Ambrose and Rand that RSG has a history of inaccurate predictions at two wind projects in Massachusetts, resulting in complaints and violations of standards at those projects, and that Tech Environmental has a history of inaccurate noise predictions at three projects in Massachusetts and one in Michigan, and that therefore neither RSG nor Tech Environmental should be relied upon to provide accurate predictions or analysis for the Saddleback Ridge project. RSG and Tech Environmental have both been involved in other projects in Maine, including Record Hill Wind and Spruce Mountain Wind, both projects that are currently operational and compliant. The Board finds that projects in other states not under Board or Department jurisdiction are not subject to the same requirements as projects in Maine, and are therefore not relevant to the review of the matter on remand. The Board further finds that the complaint and response protocols outlined in this Order are sufficient to address any potential exceedance of the noise limits herein.

Based on its review of the record, including particularly the independent reviews performed by Tech Environmental, the Board is satisfied that the proposed development will comply with applicable noise standards, including Chapter 375's nighttime sound level limit of 42 dBA. To the extent that the appellants urge the Board to impose noise standards that are more restrictive than the generally applicable 42 dBA limit, the Board declines to do so on this record. The record contains no persuasive evidence indicating that a more restrictive limit is necessary to protect the public health and welfare from noise generated by the proposed development.

G) Post-construction Monitoring Program. To ensure that the modeling and predictions submitted by the applicant and deemed reasonable by the Board correctly predicted sound levels and that the project continues to meet the noise standards reflected in this permit over time, the applicant must conduct post-construction sound level monitoring at least once during the first year of project operation, and then once each successive fifth year thereafter until the project is decommissioned. Additional compliance monitoring may also be required by the Department in response to a complaint and any subsequent enforcement action by the Department, and for validation of the applicant's calculated sound levels when requested by the Department. In accordance with Chapter 375 §10(I), compliance monitoring must include the following:

1) Post construction operation compliance testing at two separate locations, Receiver 12 and Receiver 29, should be completed within the first year of operation, and then once each successive fifth year thereafter until the project is decommissioned. Project operation compliance testing should be completed during periods when hardwood trees are without leaves.

2) Compliance testing methodology. Compliance must be demonstrated based on the following outlined conditions as set forth in Chapter 375 §10(I) and listed below. All data submittals must be accompanied by concurrent time stamped audio recordings.

a) Sound level data shall be aggregated in 10-minute measurement intervals within a given compliance measurement period (daytime: 7:00 am to 7:00 pm or nighttime: 7:00 pm to 7:00 am) under the conditions set forth in subsection I(8) of Chapter 375 §10.

b) Compliance will be demonstrated when the arithmetic average of the sound level of, at a minimum, twelve, 10-minute measurement intervals in a given compliance measurement period is less than or equal to the sound level limit set forth in subsection I(2) of Chapter 375 §10.

c) Alternatively, if a given compliance measurement period does not produce a minimum of twelve, 10-minute measurement intervals under the atmospheric and site conditions set forth in subsection I(8) of Chapter 375 §10, the wind energy development may combine six or more contiguous 10-minute measurement intervals from one 12 hour (7:00 am to 7:00 pm daytime or 7:00 pm to 7:00 am nighttime) compliance measurement period with six or more contiguous 10-minute intervals from another compliance measurement period. Compliance will be demonstrated when the arithmetic average of the combined 10-minute measurement intervals is less than or equal to the sound level limit set forth in subsection I(2) of Chapter 375 §10.

3) Measurement Procedures. Measurements shall be supervised by personnel who are well qualified by training and experience in measurement and evaluation of environmental sound, or by personnel trained to operate under a specific measurement plan approved by the Department. Measurement instrumentation and methodology shall conform to the following criteria as set forth in subsection I(8) of Chapter 375 §10.

a) Measurement Instrumentation.

i. A sound level meter or alternative sound level measurement system used shall meet all of the Type 0 or 1 performance requirements of American National Standard Specifications for Sound Level Meters, ANSI S1.4.

ii. An integrating sound level meter (or measurement system) shall also meet the Type 0 or 1 performance requirements for integrating/averaging in the International Electrotechnical Commission Standard on Integrating-Averaging Sound Level Meters, IEC Publication 61672-1 and ANSI 1.43.

iii. A filter for determining the existence of tonal sounds shall meet all the requirements of the American National Standard Specification for Octave-Band and Fractional Octave-Band Analog and Digital Filters, ANSI S1.11 and IEC 61260, Type 3-D performance.

iv. The acoustical calibrator used shall be of a type recommended by the manufacturer of the sound level meter and one that meets the requirements of American National Standard Specification for Acoustical Calibrators, ANSI S1.40.

v. The microphone windscreen used shall be of a type recommended by the manufacturer of the sound level meter.

vi. Anemometer(s) used for surface (10 meter (m)) (32.8 feet) wind speeds shall have a minimum manufacturer specified accuracy of ±1 mph providing data in one second integrations and 10 min. average/maximum values for the evaluation of atmospheric stability.

vii. Audio recording devices shall be time stamped (hh:mm:ss) and at a minimum 16 bit digital, recording the sound signal output from the measurement microphone at a minimum sampling rate of 24 thousand (k) samples per second to be used for identifying events. Audio recording and compliance data collection shall occur through the same microphone/sound meter and bear the same time stamp.

b) Equipment Calibration.

i. The sound level meter shall have been calibrated by a laboratory within 12 months of the measurement, and the microphone's response shall be traceable to the National Institute of Standards and Technology.

ii. Field calibrations shall be recorded before and after each measurement period and at shorter intervals if recommended by the manufacturer.

iii. Anemometer(s) and vane(s) shall be calibrated annually by the manufacturer to maintain stated specification.

c) Compliance Measurement Location, Configuration, and Environment.

Compliance measurement locations shall be at nearby protected locations that are most likely affected by the sound from routine operation of the wind energy development subject to permission from the respective property owner(s). Compliance measurement locations for the Saddleback Ridge Wind project shall be at Receiver 12 and Receiver 29 as discussed above.

i. To the greatest extent possible, compliance measurement locations shall be at the center of unobstructed areas that are maintained free of vegetation and other structures or material that is greater than 2 feet in height for a 75-foot radius around the sound and audio monitoring equipment.

ii. To the greatest extent possible, meteorological measurement locations shall be at the center of open flat terrain, inclusive of grass and a few isolated obstacles less than 6 feet in height for a 250-foot radius around the anemometer location. The meteorological data measurement location need not be coincident with the sound and audio measurement location provided there is no greater than a 5 mile separation between the data collection points and the measurement locations have similar characterization, i.e. same side of the mountain ridge, etc.

iii. Meteorological measurements of wind speed and direction shall be collected using anemometers at a 10-meter height (32.8 feet) above the ground. Results shall be reported, based on 1-second integration intervals, and shall be reported synchronously with hub level and sound level measurements at 10-minute measurement intervals. The wind speed average and maximum shall be reported.

iv. The sound microphone shall be positioned at a height of approximately 4 to 5 feet above the ground, and oriented in accordance with the manufacturer's recommendations.

v. When possible, measurement locations should be at least 50 feet from any sound source other than the wind energy development's power generating sources.

d) Compliance Data Collection, Measurement and Retention Procedures.

i. Measurements of operational, sound, audio and meteorological data shall occur as set forth in subsection I(8)(e)(7 through 10) of Chapter 375 §10, and reproduced below.

ii. All operational, sound and meteorological data collected shall be retained by the wind energy development for a period of 1 year from the date of collection and is subject to inspection by the Department and submission to the Department upon request.

iii. All audio data collected shall be retained by the wind energy development for a period of four weeks from the date of collection unless subject to a complaint filed in accordance with the complaint protocol approved by the Department and is subject to inspection by the Department and submission to the Department upon request. Specific audio data collected that coincides with a complaint filed in accordance with the approved complaint protocol shall be retained by the wind energy developer for a period of 1 year from the date of collection and is subject to inspection by the Department and submission to the Department upon request.

iv. Written notification of the intent to collect compliance data must be received by the Department prior to the collection of any sound level data for compliance purposes. The notification shall state the date and time of the compliance measurement period. Notice received via electronic mail is sufficient regardless of whether it is received during business hours.

v. Compliance data from the operation of a wind energy development shall be submitted to the Department, at a minimum:

(a) Once during the first year of facility operation;

(b) Once during each successive fifth year thereafter until the facility is decommissioned;

(c) In response to a complaint regarding operation of the wind energy development as set forth in subsection I(7)(j) of Chapter 375 §10 and any subsequent enforcement by the Department; and

(d) For validation of an applicant's calculated sound levels when requested by the Department.

vi. All sound level, audio and meteorological data collected during a compliance measurement period for which the Department has been notified that meets or exceeds the specified wind speed parameters shall be submitted to the Department for review and approval. All data submittals shall be submitted to the Department within 30 days of notification of intent to collect compliance data.

vii. Measurement shall be obtained during weather conditions when the wind turbine sound is most clearly noticeable, generally when the measurement location is downwind of the wind energy development and maximum surface wind speeds < 6 miles per hour (mph) with concurrent turbine hub-elevation wind speeds sufficient to generate the maximum continuous rated sound power from the nearest wind turbines to the measurement location. A downwind location is defined as within 45^0 of the direction between a specific measurement location and the acoustic center of the five nearest wind turbines. These conditions typically occur during inversion periods usually between 11 pm and 5 am. At least six of the 12 test periods used in the compliance test report must represent the nighttime period (7:00 pm through 7:00 am).

viii. In some circumstances, it may not be feasible to meet the wind speed and operations criteria due to terrain features or limited elevation change between the wind turbines and monitoring locations. In these cases, measurement periods are acceptable if the following conditions are met:

(a) The difference between the L_{A90} and L_{A10} during any 10-minute period is less than 5 dBA; and

(b) The surface wind speed (10 meter height) (32.8 feet) is 6 mph or less for 80% of the measurement period and does not exceed 10 mph at any time, or the turbines are shut down during the monitoring period and the difference in the observed L_{A50} after shut down is equal to or greater than 6 dBA; and

(c) Observer logs or recorded sound files clearly indicate the dominance of wind turbine(s).

ix. Measurement intervals affected by increased biological activities, leaf rustling, traffic, high water flow, aircraft flyovers or other extraneous ambient noise sources that affect the ability to demonstrate compliance shall be excluded from all compliance report data. The intent is to obtain 10-minute measurement intervals that entirely meet the specific criteria.

x. Measurements of the wind energy development sound shall be made so as to exclude the contribution of sound from other development equipment that is exempt from this regulation.

e) Reporting of Compliance Measurement Data.

Compliance Reports shall be submitted to the Department within 30 days of notification of intent to collect compliance data or upon request by the Department and shall include, at a minimum, the following:

i. A narrative description of the sound from the wind energy development for the compliance measurement period result;

ii. The dates, days of the week and hours of the day when measurements were made;

iii. The wind direction and speed, temperature, humidity and sky condition;

iv. Identification of all measurement equipment by make, model and serial number;

v. All meteorological, sound, windscreen and audio instrumentation specifications and calibrations;

vi. All A-weighted equivalent sound levels for each 10-minute measurement interval;

vii. All L_{A10} and L_{A90} percentile levels;

viii. All 10 minute 1/3 octave band linear equivalent sound levels (dB);

ix. All short duration repetitive events characterized by event amplitude. Amplitude is defined as the peak event amplitude minus the average minima sound level immediately before and after the event, as measured at an interval of 50 milliseconds ("ms") or less, A-weighted and fast time response, i.e. 125 ms. For each 10-minute measurement interval short duration repetitive sound events shall be reported by number for each observed amplitude integer above 5 dBA.

x. Audio recording devices shall be time stamped (hh:mm:ss) and at a minimum 16 bit digital, recording the sound signal output from the measurement microphone at a minimum sampling rate of 24 thousand (k) samples per second to be used for identifying events. Audio recording and compliance data collection shall occur through the same microphone/sound meter and bear the same time stamp. Should any sound data collection be observed by a trained attendant, the attendant's notes and observations may be substituted for the audio files during the compliance measurement period;

xi. All concurrent time stamped turbine operational data including the date, time and duration of any noise reduction operation or other interruptions in operations if present; and

xii. All other information determined necessary by the Department.

H) Complaint Response. In light of concerns raised by interested persons in this proceeding regarding the investigation of sound related complaints at similar facilities, the applicant must set up a toll free complaint hotline designed to allow concerned citizens to call in a noise related complaint 24 hours per day, 7 days per week. The hotline number must be clearly noticed to all abutting property owners and posted in prominent locations around the project site and within the towns of Carthage, Canton, and Dixfield municipal offices. For those complaints that include sufficient information to warrant an investigation, the applicant must, within two business days of receipt of the complaint, collect the complainant information (name, location, time of complaint and other complaint information) and the meteorological and operational data from the project at the time of the complaint, and submit that information to the Department and the complainant. At the Department's request, the applicant shall plot complaint locations and key information on a project area map to evaluate complaints for a consistent pattern of site, operating and weather conditions; and submit this analysis to the Department with a comparison of these patterns to the compliance protocol outlined above to determine whether testing under additional site and operating conditions is necessary and if so, shall propose a testing plan that addresses the locations and the conditions under which the pattern of complaints has occurred. The applicant will be responsible for the reimbursement of all costs incurred by the Department in the review of any noise related complaint.

I) Findings. The Board finds that the sound modeling techniques used by the applicant are in keeping with standard industrial sound modeling protocols. To confirm that the modeling accurately predicted sound levels and to ensure that the standards are met, both initially and on an ongoing basis, the Board finds that the applicant must implement the post-construction monitoring program, including complaint response, and the additional requirements described above. Monitoring results are to be reported to the Department for confirmation. Upon a finding of non-compliance by the Department, the applicant must take short term action immediately to adjust operations to reduce sound output to applicable limits under Chapter 375 §10 and this Order. Within 60 days of a determination of non-compliance by the Department, the applicant must submit, for review and approval, a compliance plan that proposes actions to bring the project into compliance at all the protected locations surrounding the development. This compliance plan must include, among other strategies, consideration and analysis of how potential turbine shutdown scenarios may bring the project into compliance with the terms of this permit. The Department will review any such compliance plan and may require additional mitigation or alternative measures. If immediate actions to bring the project into compliance with the applicable noise standards are not taken or are not successful while the process of generating and obtaining approval of a longer term plan is taking place, the Department may take such enforcement action as it finds appropriate to ensure compliance with the Site Law, applicable provisions of Chapter 375 §10, and this permit.

After consideration of the information submitted in the application, review comments of that material, the submission from FOMM and other interested persons, the subsequent submissions from the applicant, comments by the Board's review agents, and comments on the draft order, the Board finds that the proposed project will meet the applicable standards of Chapter 375 §10(I), including tonal sound and SDRS, and that the applicant has made adequate provision for the control of excessive environmental noise from the proposed project, provided that (1) the applicant submits the compliance locations for review and approval to the Department prior to the operation of the facility; (2) the applicant implements the complaint protocol outlined above prior to the operation of the facility; and (4) the applicant submits sound level monitoring reports in accordance with the post-construction monitoring program described above.

7. SCENIC CHARACTER:

In order to assess the potential scenic impact of the Saddleback Ridge Wind project on resources of state and/or national significance, the applicant submitted a visual impact assessment (VIA) of the project area which was prepared by Terrence J. DeWan & Associates, dated October 2010. This study focused on the viewshed within an 8-mile radius of any one of the proposed turbine locations. The Department hired a third party expert, James F. Palmer of Scenic Quality Consultants (SQC), to review the Scenic Character section of the application and provide the Department with comments.

The applicant also commissioned a survey of hikers at the summit of Mount Blue in Mount Blue State Park to assess public opinions of the possible effects of the project on that viewshed. The survey was conducted over Labor Day weekend in 2010. The results of that

survey are summarized in the report: "Research Report, Mt. Blue-Saddleback Ridge Wind Power Project Intercepts," prepared by Market Decisions and dated September 2010. This report is included in Section 30 of the Site Location application.

FOMM submitted a report titled "Saddleback Ridge Wind Project, Carthage, Maine, Generating Facility-Visual Quality and Scenic Character Report," dated December, 2010, and prepared by Michael Lawrence Assoc. (MLA), Landscape Architects & Site Planning Consultants. This report assesses the materials submitted by the applicant as well as summarizing field surveys conducted by MLA.

The applicant submitted a document entitled "Saddleback Ridge Wind Project, Visual Impact Assessment, Supplemental Information," dated January 13, 2011, and prepared by Terrence J. DeWan & Associates. This report responds to the December, 2010, MLA report as well as comments submitted by the Department of Conservation and by the Department's expert, SQC.

SQC submitted review comments on all of these materials to the Department in a document entitled "Review of the Saddleback Ridge Wind Project Visual Impact Assessment" dated January 21, 2011 (January 2011 VIA Review). In the course of preparing these comments SQC conducted its own fieldwork, visiting the scenic resources impacted by the proposed project. SQC's findings from this fieldwork are summarized in the January 21 report. SQC also reviewed the report submitted by FOMM and submitted separate comments on that report.

35-A M.R.S. §3452 (1) provides in pertinent part that:

> In making findings regarding the effect of an expedited wind energy development on scenic character and existing uses related to scenic character pursuant to...Title 38 §484 (3) or §480-D the [Department] shall determine, in the manner provided in subsection 3, whether the development significantly compromises views from a scenic resource of state or national significance such that the development has an unreasonable adverse effect on the scenic character or existing uses related to scenic character ... Except as otherwise provided in subsection 2, determination that a wind energy development fits harmoniously into the existing natural environment in terms of potential effects on scenic character and existing uses related to scenic character is not required for approval under...Title 38, §484 (3).

35-A M.R.S. §3452 (2) provides in pertinent part that:

> The [Department] shall evaluate the effect of associated facilities of a wind energy development in terms of potential effects on scenic character and existing uses related to scenic character in accordance with...Title 38 §484 (3), in the manner provided for development other than wind energy development if the [Department] determines that application of the standard in subsection 1 to the development may result in unreasonable adverse effects due to the scope, scale, location or other characteristics of the associated facilities. An interested party may submit information regarding this determination to the [Department] for its consideration. The [Department] shall make a determination

pursuant to this subsection within 30 days of its acceptance of the application as complete for processing.

35-A M.R.S. §3452 (3) provides that:

> A finding by the [Department] that the development's generating facilities are a highly visible feature in the landscape is not a solely sufficient basis for determination that an expedited wind energy project has an unreasonable adverse effect on the scenic character and existing uses related to scenic character of a scenic resource of state or national significance. In making its determination under subsection 1, the [Department] shall consider insignificant the effects of portions of the development's generating facilities located more than 8 miles, measured horizontally, from a scenic resource of state or national significance.

The proposed Saddleback Ridge Wind project contains "generating facilities" including wind turbines and towers as defined by 35-A M.R.S. §3451 (5) and "associated facilities" such as buildings, access roads, substations, and generator lead transmission lines as defined by 35-A M.R.S. §3451 (1). The proposed project is subject to the expedited wind energy development standards outlined above and, to the extent applicable, 38 M.R.S. §484 (3).

The Department required the applicant to conduct a VIA within a three mile radius of the proposed project. Although not specifically required by the Department, the applicant elected to also review potential visual impacts in the area between three and eight miles of the proposed project. The applicant's VIA addressed the following criteria, as set forth in 35-A M.R.S. §3452(3):

(A) The significance of the potentially affected scenic resource of state or national significance;
(B) The existing character of the surrounding area;
(C) The expectations of the typical viewer;
(D) The expedited wind energy development's purpose and the context of the proposed activity;
(E) The extent, nature and duration of potentially affected public uses of the scenic resource of state or national significance and the potential effect of the generating facilities' presence on the public's continued use and enjoyment of the scenic resource of state or national significance; and
(F) The scope and scale of the potential effect of views of the generating facilities on the scenic resource of state or national significance, including but not limited to issues related to the number and extent of turbines visible from the scenic resource of state or national significance, the distance from the scenic resource of state or national significance and the effect of prominent features of the development on the landscape.

35-A M.R.S. §3451 (9) defines a scenic resource of state or national significance (SRSNS), in part, as an area or place owned by the public or to which the public has a legal right of access. The applicant's VIA identified the following potential SRSNS:

1) National Natural Landmarks. The VIA found no National Natural Landmarks within an eight mile radius of any turbine or associated project facilities.

2) Historic Resources. The applicant conducted historic resource surveys which indicated that there are seven properties on the National Register of Historic Places within eight miles of the project area. Of these only two would have views of the proposed turbines.

- **John G. Coburn House** is located on River Road in Carthage. Up to 12 turbines would be visible from this location at a distance of approximately five miles. This is a private residence with no public access.
- **Jay-Niles Memorial Library** is located on Route 4 in North Jay. This is a public library in active use by the public. Up to 8 turbines would be visible looking northwest from the front of the library under leaf-on conditions and up to 12 turbines under leaf-off conditions. The turbines would be at a distance of approximately 7.8 miles.
- **Goodspeed Memorial Library** is located in Wilton, 7.0 miles from the project site. The project would not be visible from this location.
- **Bass Boarding House** is located in Wilton, 7.0 miles from the project site. The project would not be visible from this location.
- **North Jay Grange Store** is located in North Jay, 7.8 miles from the project site. The project would not be visible from this location.
- **Temple Intervale School** is located in Temple, 7.8 miles away from the project site. The project would not be visible from this location.
- **Weld Town Hall** is located in Weld, 5.8 miles from the project site. The project would not be visible from this location.

3) National or State Parks. There is one State Park within an eight mile radius of any generating facilities, Mount Blue State Park. Mt. Blue State Park is Maine's largest state park, encompassing approximately 8,000 acres in two sections separated by Webb Lake. A campground in the Webb Beach section has 136 wooded sites a short walk from a sandy beach and picnic area. Visitors swim, launch and rent boats, and walk on trails near the lake. Across the lake from the Webb Beach section is the 3,187-foot Mt. Blue, and the Mount Blue Trail is a popular day-hike. Visitors also enjoy walks and picnics on Center Hill. Mountain bikers, equestrians, and ATV riders use the 25 miles of multi-use trails. In winter, the park's extensive trail system supports snowmobiling, snowshoeing and cross-country skiing. Five locations among those areas with possible views within the park were evaluated in the VIA:

- **Mount Blue Summit.** All 12 turbines would be visible from this location, with five turbines at a distance of between 7.4 and 8.0 miles. Seven turbines will be beyond the eight-mile zone of potentially adverse impacts. As a group, they will occupy a horizontal angle of five degrees in a panoramic view that is approximately 150 degrees wide.

- **Center Hill Ledges.** Four or five turbines will be within the eight-mile zone of potentially adverse impacts, at a distance of from 7.6 to 8.0 miles. These turbines would occupy approximately a two-degree horizontal angle of view.
- **Farmhouse Turnout.** All 12 turbines will be visible, at a distance of from 6.9 miles to 8.0 miles. As a group they will occupy approximately a ten-degree horizontal angle of view.
- **Webb Lake Beach.** The proposed turbines will not be visible from the Webb Lake Beach.
- **Shoreline North of the Beach.** People walking on the shoreline trail north of the beach may come to places where as many as 12 turbines will be visible at distances of 5.5 to 6.5 miles. There is no project visibility along much of the shore.

4) Great Ponds. There are six great ponds located within an 8-mile radius of the project site that are listed in "Maine's Finest Lakes, the Results of the Maine Lakes Study" published by the Maine State Planning Office or "Maine Wildlands Lakes Assessment" published by the Maine Land Use Regulation Commission, pursuant to 35-A M.R.S. §3451 (9)(D). Halfmoon Pond is the only one of these lakes rated for its scenic resources and considered a SRSNS.

- **Halfmoon Pond** is 53 acres in size and is located in Carthage. It is listed as an outstanding scenic resource. It is undeveloped. There appears to be recent substantial logging activity in the area around the pond. There is an extensive network of ATV and snowmobile trails in the area. The western shoreline will have partial views of approximately 6 turbines at a distance of 6.4 to 7.0 miles. Recreational use of the pond includes fishing.

5) Scenic Rivers. The VIA found no designated Scenic River or Stream segments within eight miles of the project.

6) Scenic Viewpoints or Trails. The VIA found one scenic viewpoint on state public reserved land or on a trail used exclusively for pedestrian use. The Department of Agriculture, Conservation, and Forestry designated the Perkins Lot a scenic viewpoint of state significance by rule in accordance with 35-A M.R.S. §3457. The Bald Mountain Trail crosses privately owned land and leads to the Perkins Lot, a 166.7-acre parcel of Maine Public Reserve Land in Perkins Township.

7) Scenic Turnouts. The VIA found no scenic turnouts off of a public road designated as a scenic highway by the Maine Department of Transportation within eight miles of the proposed project.

8) Scenic Viewpoints located in the Coastal Area. The applicant's VIA states that the project is approximately 66 miles from the coastal area and is outside of the zone of visibility.

The applicant's VIA includes a summary of field investigations, photosimulations and viewshed mapping, descriptions of the visible components of the project, a description of the

project area, and assessments of the potential visual impacts to SRSNS. The VIA concludes that the visual impact on these resources "should be slight, due to the effects of distance, intervening topography, and the scale of the surrounding landscape." The applicant states that after analyzing several potential locations for wind turbine placement on Saddleback Mountain, it selected sites on the southerly ridgeline which meet the primary energy generating objectives while minimizing potential visual impacts to scenic resources, particularly at distances less than three miles. Finally, the VIA concludes that the associated facilities for the project (transmission lines, O&M building, and related improvements) will have minimal impact on views from SRSNS and that they will not be of a location, character, or size to cause an unreasonable adverse visual effect on the scenic character of the study area.

The Department's third party visual impact expert, SQC, visited most of the identified scenic resources within 8 miles of the proposed project with potential visibility. SQC also reviewed the geographic information system data used for the VIA and conducted additional analysis. SQC used ArcGIS 10 software to perform visibility analyses and to review the visual simulations provided in the VIA to determine representational accuracy.

The January 21, 2011, Project Review report by SQC thoroughly evaluated each scenic impact under the Evaluation Criteria described in 35-A M.R.S. §3452 in relation to the proposed project. In short form, the scenic impact criteria are: (1) significance of resource, (2) character of surrounding area, (3) typical viewer expectation, (4) development's purpose and context, (5) extent, nature and duration of uses, (6) effect on continue uses and enjoyment, and (7) scope and scale of project views. In Table 8 of its January, 2011, Project Review, SQC summarizes the impacts and rates the scenic impact evaluation criteria by severity and summarizes the impact for each scenic resource. The following is a summary of the overall scenic impact ratings found in the SQC report:

Table 1.

Scenic Resource	Overall Scenic Impact
Historic Sites	
John G. Coburn House	None
Goodspeed Memorial Library	None
Bass Boarding House	None
North Jay Grange Store	None
Jay-Niles Memorial Library	None-Low
Temple Intervale School	None
Weld town Hall	None
Mt. Blue State Park	
Mt. Blue Summit	Low-Medium
Center Hill Ledges	Low-Medium
Farmhouse Turnout	Low-Medium
Webb Lake Beach	None
Shoreline North of Beach	None-Low
Great Ponds	
Halfmoon Pond	None-Low

Maine Public Reserve Land	
Perkins Lot-Bald Mountain near summit	Low

In the January, 2011 report SQC concludes: "Overall (the applicant's) VIA is accurate and clearly presented. Additional fieldwork and analysis completed for this review generally supports this conclusion. A framework based on the Wind Energy Act's evaluation criteria is systematically applied to all of the state and nationally significant scenic resources."

Interested persons raised concerns regarding the potential views of the proposed project from Webb Lake/Mount Blue State Park. The Department's consultant conducted a thorough review of the materials submitted by the applicant and the interested persons, conducted fieldwork visiting the potential viewpoints in the park, and concluded that the potential views from three locations reach a visual impact severity of Low-Medium. No locations reach the level of High Severity.

Interested persons argued that the applicant's VIA did not adequately assess the visual impacts to users of Webb Lake, and that a portion of the lake should be considered part of the Mount Blue State Park swimming beach area. The Bureau of Parks and Lands did not find sufficient statutory basis to request an analysis of views from the water of Webb Lake near but not precisely on the State Park beach. Pursuant to 35-M.R.S. §3451(9), the Legislature directed that the "Maine's Finest Lakes" study, published by the Executive Department, State Planning Office in 1989, be used to determine whether a great pond is designated as a SRSNS during the review of a wind energy development. Webb Lake is not listed on the "Maine's Finest Lakes" study. Therefore, Webb Lake is not considered a SRSNS in accordance with 35-A M.R.S. §3452, and pursuant to the Wind Energy Act a general determination that a wind energy development fits harmoniously into the existing natural environment in terms of potential effects on scenic character and existing uses related to scenic character is not required for approval.

In response to the Department's draft order dated September 27, 2011, interested persons reiterated comments about the visual impact of the project, with special concern expressed for Mount Blue State Park and Webb Lake. FOMM submitted an assessment prepared by Michael Lawrence and dated October 4, 2011 which argues that Webb Lake meets the criteria underlying the 1989 Maine's Finest Lakes Study. However, the fact remains that Webb Lake is not on the list and that is the statutory criteria established in the Wind Energy Act.

Interested persons argued that the cumulative impact of proposed wind projects in the area will have an unreasonable impact on the scenic character of the area. In response to this argument the applicant submitted a summary of projects with pending applications, permitted or operating projects in the area and a viewshed analysis prepared by Terrence J DeWan & Associates. Based on this analysis, the applicant stated that Halfmoon Pond is the only SRSNS that is located within eight miles of the Saddleback Ridge Wind Project and any other wind power project. Halfmoon Pond is also within eight miles of the Record Hill Wind project, but that project will not be visible from the pond due to intervening topography.

In response to the Department's draft order dated September 27, 2011, interested persons continued to raise concerns related to the cumulative visual impacts of wind projects on the area. The Department found no statutory basis to assess these potential impacts without reference to a SRSNS in accordance with Title 35-A §3452.

Interested persons have also argued that the proposed project will unreasonably impact the scenic character of Saddleback Ridge itself. However, Saddleback Ridge does not qualify as a SRSNS in accordance with 35-A M.R.S. §3452, and a general determination that a wind energy development fits harmoniously into the existing natural environment in terms of potential effects on scenic character and existing uses related to scenic character is not required for approval.

Based on the information presented in the VIA, the design of the proposed project, the applicant's user survey, review comments from SQC, the comments submitted by interested persons including the MLA report, and in consideration of the evaluation criteria pursuant to 35-A M.R.S. §3452 (3), the Board reiterates the findings and conclusions pertaining to scenic character in its February 18, 2012 decision on appeal, and adopts the Department's findings that no aspect of the project will have an unreasonable adverse effect on the scenic character, or existing uses related to scenic character of SRSNS, or other existing uses in the area.

8. WILDLIFE AND FISHERIES:

The applicant submitted the results of a series of ecological field surveys conducted by Tetra Tech, including avian and bat surveys, wetland delineations, rare, threatened, and endangered species surveys, and vernal pool surveys within the project area. In its preparation of the application, Tetra Tech consulted with the Department and other natural resource review agencies, including the Department of Agriculture, Conservation and Forestry, Maine Natural Areas Program (MNAP), the Maine Department of Inland Fisheries and Wildlife (MDIFW), the U.S. Fish and Wildlife Service (USFWS), and the U.S. Army Corps of Engineers (USACOE).

Tetra Tech conducted avian and bat surveys during the spring migration, summer residency and fall migration periods of 2009. The purposes of the studies were to document avian and bat occurrences in the study area, to provide baseline information on the avian and bat communities around the project area, and to facilitate a project design that minimizes potential environmental impacts.

Surveys were targeted to provide data to help assess the project's potential to impact birds and bats; rare, threatened and endangered (RTE) plants and animals; breeding amphibians; and wetlands. The scope of the surveys was based on a combination of methods employed within the wind power industry for pre-construction surveys to address regulatory requirements, with guidance provided by the Department, USFWS, MDIFW and USACOE. Avian and bat mortality through direct or near collisions with wind turbines are two of the possible wildlife impacts that could occur as a result of the proposed project.

A) Significant Vernal Pools. Tetra Tech conducted vernal pool surveys of the project area during the amphibian breeding season (April and May) in 2009 and 2010. The 2009

vernal pool field surveys covered an expanded survey area and evaluated a number of alternative layouts for project facilities so that the alternative with the least impact could be identified. Eight resources were identified within the expanded field survey area. Only one of these resources was classified as a potential significant vernal pool (PSVP) and four were classified as potential vernal pools (PVP). Three were classified as amphibian breeding areas. PVPs have the physical characteristics of NRPA-regulated vernal pools but are only classified as significant vernal pools if they also meet the biological criteria identified in Chapter 335, the Department's Significant Wildlife Habitat Rules. PSVPs meet at least one of the biological criteria of Chapter 335. The proposed project will have no direct impacts to any of these resources. A portion of the proposed transmission line crosses the Critical Terrestrial Habitat of the PSVP. The proposed alteration qualifies as a minimal impact activity under the Chapter 305 permit by rule standards for alteration of significant wildlife habitat, and is addressed by PBR #51635 submitted with the application as noted in Section 1(A) above.

B) Inland Waterfowl and Wading Bird Habitat. The proposed project area does not contain Inland Waterfowl and Wading Bird Habitat mapped by MDIFW in areas proposed for wind turbines, access roads, collector lines, and associated structures.

C) Deer Wintering Areas. The proposed project area does not contain any MDIFW mapped Deer Wintering Areas in areas proposed for wind turbines, access roads, collector lines, and associated structures.

D) Rare, Threatened, and Endangered (RTE) Species. Tetra Tech conducted an RTE species survey for plant and animal species within the project area. In addition to that survey, bird and bat surveys conducted in 2009 also included investigations for RTE species or Species of Special Concern on the project site.

One peregrine falcon was observed during the fall surveys. Peregrine falcons are listed as a state endangered species. Seven observations of bald eagles were recorded by Tetra Tech, four in the spring and three in the fall surveys. Bald eagles are listed as a species of special concern in Maine.

Two bat species of special concern, the hoary bat and the silver haired bat, were observed at the project site during the surveys but both were found to be of low occurrence in the project area. No calls were identified from federally or state-listed endangered or threatened bat species.

For terrestrial species, Tetra Tech conducted surveys for the roaring brook mayfly, an Endangered Species, and the northern spring salamander, a species of Special Concern, as recommended by MDIFW. Surveys were conducted in consultation with MDIFW staff during the 2009 field season. No streams containing suitable habitat for these species were identified.

E) Migratory Birds, Bats, and Raptors. Tetra Tech used a MERLIN avian radar system to automatically and continuously record bird and bat activity in the vicinity of the proposed

project during both the spring and fall migration periods. During 2009, Tetra Tech conducted a spring and a fall raptor migration survey, a spring breeding bird survey, a spring and fall migrant stopover survey, and a spring and fall bat acoustic survey. The raptor migration studies found low passage rates as compared to surveys taken at mountains closer to the coast. Bat activity levels and timing of movements documented at the project site did not indicate large migratory movements of bats during the survey periods.

Based on results from pre-construction surveys, as well as results from wildlife studies at other wind energy projects operating in Maine, Tetra-Tech determined impacts to birds and bats as the result of the project are likely to be low. Post-construction surveys will continue to evaluate the risk to birds and bats and will provide the necessary data to confirm the actual impacts of the project.

MDIFW found that the findings presented in the application for development of the Saddleback Ridge Wind Project are consistent with other pre-construction studies conducted for wind power projects MDIFW has reviewed in Maine. MDIFW commented that additional pre-construction studies at this site are not necessary. This determination is based on state regulations and review policies.
MDIFW cited recent studies (Arnett et al. 2009 & 2010, Baerwald et al. 2008) at operating wind facilities that have indicated that increasing the cut-in speed (the wind speed at which the turbine is allowed to begin rotating) for operating turbines to 5.0 meters per second has significantly decreased turbine-caused fatalities for bats. MDIFW recommended that this method of operation be adopted to reduce bat mortality. Tetra Tech responded, in a letter dated February 11, 2011, that its review of recent studies indicated that further study is needed to determine the effectiveness of this mitigation technique taking into consideration site specific factors. Tetra Tech further argued, based on its pre-construction studies, that the Saddleback Ridge site is not likely to present a high risk for bat mortality. The applicant proposed that it would work with MDIFW to design a post-construction monitoring plan to determine if bat mortality is occurring at this site, and to develop a tiered approach to reduce impacts to bats if the Department finds that the post-construction monitoring results indicate the need for such mitigation. The Department found that this is a reasonable proposal. In response to the Department's draft order dated September 27, 2011, interested parties argued that the 5.0 meters per second cut-in speed should be applied prior to the commencement of operation. The Department found that it is reasonable to reserve this management measure until post-construction monitoring has been accomplished. The Board adopts the Department's findings in its October 6, 2011 Order regarding post-construction monitoring and subsequent management and mitigation strategies.

F) Post-construction Monitoring. MDIFW requested that the applicant be required to implement a post-construction bird and bat mortality monitoring plan to ensure that there are no unreasonable adverse impacts on birds and bats. The applicant proposed a post-construction monitoring program that would include mortality searches at six of the 12 proposed turbines, two surveys per week during the spring and fall migration seasons and one survey per week during the summer, to commence in the first year of operation. The

applicant proposed to conduct two non-consecutive years of post-construction mortality surveys within the first five years of project operation. Surveys will include carcass searches, searcher efficiency trials and scavenger removal assessments in order to determine avian and bat mortalities. Surveys will be conducted between April 1 and November 1. Before commencing field work, the applicant proposed to contact MDIFW to determine appropriate search intervals, appropriate number of turbines to be surveyed, and to discuss any other logistical constraints related to scavenger removal and searcher efficiency trials. The first round of surveys will take place within the first year after the project is fully operational. The applicant proposed to review the findings with MDIFW and make adjustments based on MDIFW's recommendations for the second survey, which will most likely occur during year three or four of operation.

In its review comments, MDIFW stated that post-construction monitoring protocols for wind projects are rapidly evolving. MDIFW and the Department will advise the applicant in refining the design of its monitoring plan as necessary prior to project operation. This post-construction monitoring protocol will be adaptive as results from operating wind power projects provide new information on possible ways to minimize impacts on birds and bats. The post-construction monitoring plan will be reviewed by MDIFW and the Department and must be approved by the Department prior to operation of any wind turbines, and prior to the commencement of the second survey.
All survey results will be evaluated by MDIFW staff and the Department, and in response to the results the Department may require one or more adaptive management measures in an effort to minimize wildlife mortalities at one or more turbine sites. Based on recent research findings and the results of operation, and based on MDIFW's review of the survey results, if the Department determines that unexpected adverse effects to wildlife are occurring, measures that may be required include, but are not limited to:

1) Modified Operations. If a turbine is found to be causing unreasonable adverse impacts as determined by the Department, the Department may require suspending operation for periods determined by the Department to be of highest risk, provided there is a basis to expect that a non-operating turbine will pose less risk than an operating turbine. For example, if impacts were occurring at night during certain periods of fall migration, the Department may require that the applicant modify or suspend the operation of the turbine during those high-risk nights.

2) On-Site Habitat Management. The applicant may be required to implement habitat management measures in the vicinity of the turbines to modify wildlife behavior and reduce the risk of impacts. Any such measures may be required by the Department in response to specific concerns or impacts that are related to habitat factors. Examples include, but are not limited to, modifying the type or extent of vegetation cover, forest openings, perching and nesting sites, or cover for prey species.

3) Habitat Protection. The applicant may be required to provide appropriate compensatory mitigation for wildlife impacts such as the protection or enhancement of wildlife habitat with functions and values similar to those impacted by the project.

The Department will determine the need for and appropriateness of any compensatory mitigation.

Prior to the start of operation, the applicant must submit a post-construction monitoring plan to the Department for review and approval. The monitoring plan, including the survey protocol and its implementation method, must be developed in consultation with MDIFW, and must be inclusive of both migratory and non-migratory movement periods. The Department may require that it be adjusted in the future depending on the type and severity of observed impacts, cost benefit considerations, and practicality. Additional measures may be considered by the Department depending on future research findings.

In response to the Department's September 27, 2011 draft order, interested persons commented that the draft order did not adequately address potential impacts to avian, bat and raptor populations. Interested persons referenced comments submitted by US Fish and Wildlife to the Army Corps of Engineers in the course of the review of the applicant's proposal by that regulatory agency. The recommendations of USF&W are directed to the Army Corps under their licensing authority which is different from the Department's. These comments have also been provided to MDIFW and where they address mutual concerns will be taken into account in the design of the post construction monitoring plans required by this permit.

Based on the information submitted in the application, and MDIFW's review comments, the Board adopts the Department's findings in its October 6, 2011 Order, that the proposed project will not unreasonably harm any significant wildlife habitat, unreasonably disturb wildlife, or unreasonably affect the use of the site by the subject wildlife, provided that the applicant submits a finalized post-construction avian, bat, and raptor post-construction monitoring plan to the Department for review and approval prior to the beginning of operation of the Saddleback Ridge Wind Project.

G) Streams and associated fisheries. The applicant proposes to utilize four temporary stream crossings of NRPA regulated streams, one perennial and three intermittent, during the construction of the proposed transmission line. The applicant proposes to use timber mat bridges to cross these streams. MDIFW recommends a stream crossing work window of July 15 to October 1 for any in-stream work. Timber mat bridges that completely span the stream and its banks are not in-stream work and are therefore not restricted to this construction period.

Based on the information submitted in the application and MDIFW's review comments, the Board adopts the Department's findings in its October 6, 2011 Order that the proposed project will not unreasonably harm fisheries habitats provided that all in-stream work is conducted between July 15 and October 1.

9. HISTORIC SITES AND UNUSUAL NATURAL AREAS:

Historic Sites: On behalf of the applicant, Tetra Tech conducted a Phase 0 Archaeological Reconnaissance Survey and Phase 1 Prehistoric Archaeological Investigation with shovel

tests and a photographic record. Tetra Tech also conducted a reconnaissance-level historical architecture survey.

A) Surveys. In Section 8 of the application, the applicant submitted the results of the Phase 0 Archaeological Reconnaissance Survey in a report entitled "Phase 0 Archaeological Reconnaissance Survey Report, Saddleback Ridge Wind Project, Towns of Carthage, Dixfield, and Canton, Franklin and Oxford Counties, Maine," prepared by Tetra Tech dated October, 2010. Tetra Tech conducted documentary research at the Maine Historic Preservation Commission (MHPC), and conducted field surveys of the project site. There are no previously recorded prehistoric archaeological sites or surveys within a two mile radius around the project study area, nor are there any prehistoric sites eligible for nomination or listed in the State or National Register of Historic Places located within the area potentially affected by the project. No prehistoric or historic artifacts or possible indications of prehistoric features were observed during the Phase 0 pedestrian archaeological survey for the project. Based on the results of the Phase 0 survey, Phase 1 Archaeological Investigations were conducted in two archaeological sensitive areas. No historic period artifacts or any indications of prehistoric or historic cultural features were recovered from any of the survey work.

B) Historic Architecture Survey. A historic architecture reconnaissance survey was conducted in accordance with the requirements of Section 106 of the National Historic Preservation Act of 1966. The report and analysis of the historic architecture was prepared by Tetra Tech, dated August, 2009 – October, 2010, and included in the application as Attachment 8-3. The survey addressed 191 properties and found the proposed project would have no adverse effect on historic properties.

   This survey was conducted for a five mile radius within the proposed wind turbines and a three mile radius around the transmission line, with respect to potentially eligible, eligible, and listed properties under Section 106 criteria. The survey found no historic properties that would be directly impacted by the proposed project. The Tetra Tech survey identified seven properties in the eight mile visual impact survey area that are listed in the National Register of Historic Places: the John G. Coburn House, the Goodspeed Memorial Library, the Bass Boarding House, the North Jay Grange Store, the Jay-Niles Memorial Library, the Temple Intervale School, and the Weld Town Hall. Based on the results of the VIA conducted by Terrance J. DeWan &Associates and discussed in section 7 above, Tetra Tech concluded that the proposed project would have no unreasonable adverse impact on these seven properties.

The MHPC reviewed the studies submitted by the applicant. In a letter dated November 16, 2010, MHPC commented that, based on the standards of the Site Location of Development Law and the Wind Energy Act, there are no historic sites (archaeological or architectural) in the project area, and therefore the proposed project will have no direct or scenic impact on such resources. Based on the survey information submitted in the application and MHPC's review comments, the Board adopts the Department's findings in its October 6, 2011 Order that the proposed development will not have an adverse effect on the preservation of any historic sites either on or near the project site.

Unusual Natural Areas: To determine if unusual natural areas, including areas with rare, threatened, and endangered (RTE) species occur within the scope of the project, the applicant consulted with the Maine Natural Areas Program. After reviewing its records and the survey work submitted by the applicant, in a memorandum dated December 14, 2010, the Maine Natural Areas Program stated that there are no rare or unique botanical features in the vicinity of the project site.

Based on the applicant's rare community's survey and the comments from the Maine Natural Areas Program, the Board adopts the Department's findings in its October 6, 2011 Order that the proposed development will not have an adverse effect on any unusual natural areas either on or near the development site.

10. BUFFER STRIPS:

The applicant proposes to maintain vegetated buffers for stormwater management and waterbody protection. Buffers for the proposed project include three different types of buffers: no-disturbance buffers around roads and turbines, a transmission corridor buffer, and waterbody buffers at streams and other wetland crossings. The vegetation cutting practices which have been proposed to preserve and maintain buffers include no cutting, limited and selective clearing, and mechanized clearing combined with selective use of herbicides.

A) Access Road, Crane Path, and Turbine Buffers. The application states that a 250-foot to 300-foot radius around each turbine is typically cleared, resulting in a circular impact. For this project the applicant has proposed a design which minimizes the clearing, resulting in smaller, irregularly-shaped openings. The applicant has maximized the use of relatively level terrain on the ridge to minimize cut and fills slopes on the road shoulders. In addition all workspace in the vicinity of the towers, up to the turbine foundations will be loamed, seeded and re-vegetated following construction.

B) Transmission Line Buffers. The area within the electrical transmission line corridor will require vegetative cutting to meet line safety and reliability goals. The applicant proposes to employ a Vegetation Management Plan (further described below) in accordance with ISO-New England safety standards to control the growth of vegetation along the transmission line. Transmission line corridor construction and maintenance procedures will provide for the retention of low ground cover to the greatest extent practicable during construction, restoration and stabilization of areas affected by construction, and ongoing maintenance activities with the intention of promoting long-term growth of low vegetation.

C) Stream Buffers. The applicant proposes to maintain a 75-foot riparian buffer from regulated rivers, streams and brooks with the exception of crossings. The project was designed to maintain a 100-foot setback from waterbodies for pole placement. The use of herbicides will be prohibited within all waterbody buffers and within 25 feet of any

wetlands with water visible at the surface. Additionally, no refueling or maintenance of equipment will be performed within waterbody buffer areas.

D) Wetlands. The applicant proposes to minimize clearing of vegetation in wetland areas and within any amphibian breeding habitat areas (these areas do not meet the requirements to be considered Significant Vernal Pools but they may still support the breeding activities of some amphibians).

E) Vegetation Maintenance Plan. The applicant submitted a Vegetation Maintenance Plan (VMP) (Attachment 10-1 of the application) entitled "Saddleback Ridge Wind Project: Vegetation Management Plan." The plan summarizes vegetation maintenance methods and procedures that will be utilized by the applicant for the transmission line corridor, and describes maintenance requirements and restrictions associated with waterbody crossings.

Based on the information submitted by the applicant, the Board adopts the Department's findings in its October 6, 2011 Order that the applicant has made adequate provision for buffer strips provided that the applicant complies with the post-construction VMP submitted in the application, and that all visual screening buffers, stormwater treatment buffers, and stream buffers are permanently marked on the ground pursuant to Chapter 500 Stormwater Management rules prior to the start of construction. Further, prior to the start of operation, the applicant must record buffer deed restrictions with the Registry of Deeds for the subject parcels. The deed restrictions must be consistent with Chapter 500 Stormwater Management Rules and have attached a plot plan for the parcels, drawn to scale, that specifies the location of all buffers on the parcels. The applicant must submit a copy of the recorded deed restrictions, including the plot plans, to the Department within 60 days of the recording.

11. SOILS:

The applicant submitted Class B High Intensity and Class L Linear Soil Surveys for the proposed project site prepared by Albert Frick Associates, Inc. and dated November, 2009, and October 2010. These reports are contained in Section 11 of the application and concluded that the soils are generally appropriate for the proposed construction activities.

The applicant submitted a blasting plan which outlines the proposed procedures for blasting in the area of the turbine foundations, the proposed access roads in areas requiring significant cut, the underground power line trenches, and the substation pad. The applicant also submitted plans for acid rock drainage should such rock be encountered. The applicant proposes to balance cuts and fills on the project site and reuse as much material as possible.

Interested persons contend that the proposed blasting and other project activities may negatively impact their water supply wells. The applicant submitted a letter from Richard Groll, an Industrial Seismologist, dated September 24, 2010. Mr. Groll reviewed the blasting plan for the proposed project and stated that "the proposed blasting operations at this site will not cause damage to the surrounding structures or water wells. The scale of blasting required at this site is commonly employed within 50 feet of occupied dwellings and working water

supply wells without causing damage. The blasting process is highly refined and scientific." Mr. Groll further commented, "there is no reason to believe that the blasting activity at the Saddleback Ridge Wind Project will disturb the rock structure or composition in a manner that would result in the diminution of the quality or quantity of local drinking water supplies. The rock at Saddleback Mountain is a highly elastic, hard, ridge forming material which will not fracture outside the intended areas of rock excavation."

The applicant proposed to conduct a pre-blast survey of all structures within a 2,000-foot radius of all areas to be blasted. In addition, in a letter dated April 27, 2011, the applicant proposed that all property owners with an active well within 3,500 feet of any blasting activity will be offered pre- and post-construction water testing. This testing will be incorporated into the pre-blast survey.

In response to the Department's September 27, 2011 draft order, interested persons expressed concerns about how such wells would be defined and identified. The Board adopts the Department's findings in its October 6, 2011 Order that it is reasonable to require the applicant to develop the survey protocols in consultation with Department geologists and to ensure that the plan is clear on these questions prior to commencement of construction.

The soils reports and other application materials described above were reviewed by staff from the Department's Division of Environmental Assessment (DEA). After review of the applicant's proposals and the materials submitted DEA commented that blasting as necessary for this project can be conducted without unreasonable adverse impact on existing uses and properties. Prior to any blasting on the project site, the applicant will be required to submit the final plans for pre-blast surveys of structures and active wells to the Department for review and approval. All water-quality, water yield or any other data related to water supply wells, collected during the pre-blast surveys will also be required to be submitted to the Department. All blasting must be conducted in compliance with the Department's Performance Standards for Quarries (38 M.R.S. §490-Z (14)).

Based on the information submitted by the applicant, the Board adopts the Department's findings in its October 6, 2011 Order that the applicant has submitted sufficient evidence that the soils on the project site present no limitations to the proposed project that cannot be overcome through standard engineering practices provided that, prior to any blasting on the project site, the applicant submits a final plans for a pre-blast survey which includes all structures within 2,000 feet and all active wells within 3,500 feet of any proposed blasting, to the Department for review and approval.

12. STORMWATER MANAGEMENT:

The construction of the proposed project will create 42 acres of disturbed area. The applicant proposes that at the completion of construction, it will re-vegetate all but 10.9 acres of developed area, of which 9.4 acres will be impervious area. The proposed project is not located in the watershed of a lake most at risk or an urban impaired stream. The applicant submitted a stormwater management plan based on the Basic, General, and Flooding standards contained in Chapter 500 of the Department Rules. Stormwater quality treatment

will be achieved with various Best Management Practices (BMPs) and buffers as described in the application. The applicant's post-development drainage analysis shows no increase in peak flow rates and a negligible increase in runoff volume for a 25-year storm event. The applicant proposes to achieve stormwater quality treatment and flooding mitigation with numerous buffers that will provide treatment and mitigation through absorption, disconnected impervious area, and lengthening of flow paths.

A) Basic Standard:

1) Erosion and Sedimentation Control: The applicant submitted an Erosion and Sedimentation Control Plan (Section 14 of the application) that is based on the performance standards contained in Appendix A of Chapter 500 of the Department's rules and the BMPs outlined in the Maine Erosion and Sediment Control BMPs, which were developed by the Department. This plan and plan sheets containing erosion control details were reviewed by the Department's Division of Watershed Management (DWM). DWM commented that the applicant's erosion control plan is an acceptable plan and a good starting point for providing erosion control protection during construction. However, based on site and weather conditions during construction, additional erosion and sedimentation control measures may be necessary. Regular inspection by a professional engineer will also be necessary to assure proper implementation and maintenance of the proposed erosion control measures, and the identification of any additional measures that may be needed.

   Given the level of disturbance, steep slopes, and close proximity to water resources, the applicant must retain the services of a third party inspector in accordance with the Special Condition for Third Party Inspection Program, which is attached to this Order. The inspecting engineer must make weekly (at a minimum) visits to the project site while the project is under construction, report on the erosion and sedimentation controls and any problems encountered during the inspections, and recommend corrective measures if any must be taken. During construction, any area of instability or erosion must be corrected immediately and maintained until the site is completely stabilized or vegetation is established.

   Erosion control details will be included on the final construction plans and the erosion control narrative will be included in the project specifications to be provided to the construction contractor. Prior to the start of construction, the applicant must conduct a pre-construction meeting to discuss the construction schedule and the erosion and sediment control plan with the appropriate parties. This meeting must be attended by the applicant's representative, Department staff, the design engineer, the contractor, and the third-party inspector.

2) Inspection and Maintenance: The applicant submitted a maintenance plan that addresses both short and long-term maintenance requirements. This plan was reviewed by DWM. The maintenance plan is based on the standards contained in Appendix B of Chapter 500. The applicant will be responsible for the maintenance of the stormwater management system.

3) Housekeeping: The proposed project will comply with the performance standards outlined in Appendix C of Chapter 500.

Based on DWM's review of the applicant's erosion and sedimentation control plan and the maintenance plan, the Board adopts the Department's findings in its October 6, 2011 Order that the proposed project meets the Basic Standards contained in Chapter 500(4)(A) provided that the applicant conducts a pre-construction meeting and retains a third-party inspector to oversee project construction.

B) General Standards:

The applicant's stormwater management plan proposes general treatment measures designed to mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms, provide for effective treatment of pollutants in stormwater, and mitigate potential temperature impacts. Mitigation for the non-linear portion of the project (the O&M building) is proposed to be achieved by using an alternative buffer design that DWM has reviewed and approved in accordance with Chapter 500(4)(B)(2). The applicant proposes to utilize a forested buffer with an additional treatment berm constructed on the re-vegetated portion of the crane path and access road. Though the natural slope is greater than the standard buffer table allows, DWM stated that the additional treatment berm will improve the buffer's efficiency sufficiently to meet the standard buffer treatment requirement. DWM further commented that buffer treatment in this case is preferable to the use of more physical treatments such as soil filters or ponds. The proposed access roads meet the definition of "a linear portion of a project" in Chapter 500 and the applicant is proposing to provide stormwater treatment for over 76% of the volume from the impervious area. The applicant is proposing to provide treatment for 100% of the non-linear impervious areas.

The Board adopts the Department's findings in its October 6, 2011 Order that both the linear portion of the project and the non-linear portion of the project will meet the standards of Chapter 500.

The forested, limited disturbance stormwater buffers will be protected from alteration through the execution of a Declaration of Restrictions. The Declaration of Restrictions must have attached to it a plot plan, drawn to scale, that specifies the location of the buffers. The applicant proposes to use the deed restriction language contained in Appendix G of Chapter 500. The Declaration of Restrictions must be recorded prior to the start of operation, and the applicant must submit a copy of the recorded deed restriction including the plot plan to the Department within 90 days of its recording. Prior to initiating work in an area, the location of forested buffers must be permanently marked on the ground. Methods of marking the ground must include, but are not limited to, a combination of field flagging and clearly marked permanent signage.

The stormwater management system proposed by the applicant was reviewed by, and revised in response to comments from, DWM. After a final review, DWM commented

that the proposed stormwater management system is designed in accordance with the General Standards contained in Chapter 500(4)(B). DWM recommended that the applicant retain the services of a professional engineer to inspect the construction and stabilization of the road ditch turnouts and stone bermed level spreaders to be built on the site. Inspections must consist of weekly visits to the site to inspect each turnout from initial ground disturbance to final stabilization. If necessary, the inspecting engineer will interpret the turnouts' location and construction plan for the contractor. The inspecting engineer will notify the Department in writing within 14 days of the completion of construction and stabilization of the turnouts and level spreaders. Accompanying the engineer's notification must be a log of the engineer's inspections giving the date of each inspection, the time of each inspection and the items inspected on each visit.

Based on the stormwater system's design the Board adopts the Department's finding in its October 6, 2011 Order that the applicant has made adequate provision to ensure that the proposed project will meet the General Standards contained in Chapter 500(4)(B) provided that the applicant adheres to the required protocol for inspections of the ditch turnouts and level spreaders, that the buffers are permanently marked on the ground, and a copy of the recorded deed restrictions are submitted to the Department as outlined above.

C) Flooding Standard:

The applicant is proposing to utilize a stormwater management system based on estimates of pre- and post-development stormwater runoff flows obtained by using Hydrocad, a stormwater modeling software that utilizes the methodologies outlined in Technical Releases #55 and #20, U.S.D.A., Soil Conservation Service and detains stormwater from 24-hour storms of 2-, 10-, and 25-year frequency.

The Department's DWM reviewed the analysis of the watersheds involved in the proposed project for potential flooding impacts. The applicant's model shows the project's impact on the weighted curve number of each watershed and the subsequent impact to peak flows for these watersheds for the 25 year, 24 hour storm. The evidence shows that the weighted curve number for each subwatershed will exhibit a negligible change. This change is well within the model tolerances and does not take into consideration the redistribution of flows in the buffer areas that will lengthen the time of concentration for all the watersheds. DWM analysis is that the model indicates that the project meets the flooding standard requirement of maintaining the pre-construction peak flows for the 2, 10 and 25 year, 24-hour storm at the property boundary.

The following minor adjustments may be made during construction without advance notice to the Department provided they do not impact protected resources and are reflected in the final as-built drawings: changes that result in a reduction in impact and/or footprint (such as a reduction in clearing or impervious area, and elimination of structures or a reduction in structure size); location of a structure within the identified clearing limits; the type of foundations used; additional drainage culverts, level spreaders or rock sandwiches; changes to culvert size or type provided that the culvert does not

convey a regulated stream and that the hydraulic capacity of the substitute culvert is greater than or equal to that of the original; and changes of up to 10 feet in the base elevation of a turbine vertically up or down as long as the change in elevation does not result in new visual impacts or changes to the stormwater management plan. Additionally, the following minor adjustments may be made upon prior approval by the third party inspector or Department staff and do not require a revision or modification of the permit but must be reflected in the final as built drawings: minor changes that do not increase overall project impacts or project footprint and which do not impact any protected resources as long as any new areas of impact have been surveyed for environmental resources and do not affect other landowners. These changes include adjustments to horizontal or vertical road geometry that do not result in changes to the stormwater management plan; a shift of up to 100 feet in a turbine clearing area; and adjustments to culvert locations based on field topography.

Based on the system's design and DWM's review, the Board adopts the Department's findings in its October 6, 2011 Order that the applicant has made adequate provision to ensure that the proposed project will meet the Flooding Standard contained in Chapter 500(4)(E) for channel limits and runoff areas, and peak flow from the project site.

The Board also adopts the Department's findings in its October 6, 2011 Order that the proposed project will meet the Chapter 500 standards for: (1) easements and covenants; (2) management of stormwater discharges; (3) discharge to freshwater or coastal wetlands; and (4) threatened or endangered species.

13. GROUNDWATER:

There are no mapped significant sand and gravel aquifers on the project site. The Maine Geological Survey data indicates that the nearest aquifer is located along the Androscoggin River to the south of the project. A single drilled well is proposed to serve domestic water needs at the project's O&M building.

Spill Prevention, Control, and Countermeasures (SPCC) plan. The applicant submitted a plan detailing steps to be taken to prevent groundwater contamination during construction. The applicant stated that the potential sources of groundwater contamination during construction will be fuel and hydraulic and lubricating oils used in the operation of vehicles and construction equipment. The plan includes general operational requirements, storage and handling requirements, and training requirements to prevent spilling of oil, hazardous materials or waste. The plan also sets out spill reporting and cleanup requirements should such an event occur. No herbicides will be used, stored, mixed, or transferred between containers within the stream buffer areas, and no refueling of equipment will be allowed in these buffers. Prior to any construction, site preparation, or maintenance, the applicant must flag the boundaries of any such setbacks in the field. All staff must receive suitable training to recognize and comply with these setback markers and requirements. Prior to any application of herbicides or other use of chemicals or petroleum products during maintenance of the transmission line, the transmission line right-of-way must be checked for any new

construction that would require establishment of setbacks for herbicides or other use of chemicals or petroleum products, and any such setback must be clearly flagged in the field.

Because the project involves the handling of chemicals or petroleum on site, including the changing of lubricating oils in the turbines, the applicant is also required to submit an operational SPCC plan prior to the commencement of operation of the project.

DEA reviewed the applicant's proposals for protecting groundwater and recommended that the applicant be required to confirm the installation of the well and wastewater disposal system in accordance with the proposed plans after construction.

Based on the information submitted by the applicant, the Board adopts the Department's findings in its October 6, 2011 Order that the proposed project will not have an unreasonable adverse effect on groundwater quality provided that, prior to operation, the applicant submits to the Board for review a site drawing showing the location of the O&M building well and confirming that the wastewater disposal field was constructed at the approved location, and an operational SPCC plan.

14. WATER SUPPLY:

The proposed project will not require a water supply for the operation of the wind turbines or the electrical equipment. The only anticipated demand for water will be at the O&M building. The O&M building will house a maximum of six staff people and will provide bathroom facilities and potable water for the staff. The applicant anticipates that 135 gallons per day will be required to provide for these purposes. An individual well will be drilled on-site to supply potable water to the O&M building.

The applicant states that non-potable water will be needed for dust abatement. This water will not be withdrawn from groundwater sources or from rivers or streams. The applicant proposes to use a tanker truck to bring water to the site from Wilson Pond in Wilton. The Board adopts the Department's findings that the proposed amount of withdrawal is not anticipated to have any impact on lake water levels.

The applicant's proposals for water supply have been reviewed by the Department's DEA, which had no objection to the applicant's proposals provided the final location of the water supply well is confirmed after construction.

Based on the information submitted by the applicant, the Board adopts the Department's findings in its October 6, 2011 Order that the applicant has made adequate provision for securing and maintaining a sufficient and healthful water supply.

15. WASTEWATER DISPOSAL:

The applicant stated that the only potential generation of wastewater would be from the domestic water needs at the proposed O&M building. The applicant submitted a design for a subsurface wastewater disposal system designed to handle wastewater from up to six

employees. This equates to approximately 135 gallons of wastewater per day. There will be no commercial or industrial wastewater generation associated with the proposed project.

The applicant submitted a subsurface wastewater disposal system design (HHE-200 form) dated October 1, 2010, and prepared by Albert Frick, a licensed professional site evaluator. The applicant also submitted the soil survey map and report discussed in Finding 11. The design of the wastewater disposal system complies with the Subsurface Wastewater Disposal Rules. The wastewater disposal system will be built on suitable soils adjacent to the O&M building, a minimum of 100 feet from the water supply well.

The applicant's proposal for wastewater disposal was reviewed by DEA, which found the proposal to be more than adequate, as the design will accommodate up to 300 gallons per day. Based on the information submitted by the applicant, the Board adopts the Department's findings in its October 6, 2011 Order that the proposed wastewater disposal system will be built on suitable soil types.

16. SOLID WASTE:

The development of the site and construction of the turbines will generate approximately 230 cubic yards of construction debris, packaging materials, and associated wastes. All construction and demolition debris generated will be disposed of at the Juniper Ridge Landfill, which is in substantial compliance with the Department's Solid Waste Management Regulations of the State of Maine. By letter dated October 29, 2009, Juniper Ridge Landfill stated that the landfill has the capacity to accept this construction waste. This facility is located in Alton, Maine.

All marketable trees located in the footprint of the proposed turbine pads and roads will be harvested and sold for timber or pulp. Non-marketable wood waste will be processed and used as mulch on the site. Stumps will remain in place wherever possible. Stumps will be shredded and used for erosion control mulch.

Solid waste produced during operation of the proposed project is expected to be limited to general office waste from the O&M building. The applicant has indicated that it will contract with Archie's Inc., which will haul the office waste to the Northern Oxford Regional Waste Facility in Mexico, Maine.

The Department's Bureau of Remediation and Waste Management reviewed the applicant's proposal for solid waste disposal, and stated that the proposal is adequate. Any change in these plans would require the approval of the Department. Based on the information submitted by the applicant, the Board adopts the Department's findings in its October 6, 2011 Order that the applicant has made adequate provision for solid waste disposal.

17. FLOODING:

The applicant does not propose to construct any structure within a flood zone. As discussed in Finding 12, the Department has reviewed the applicant's plans for stormwater

management and found that the project is unlikely to have any adverse impact on downstream flooding.

Based upon the nature of the project and the fact that no part of it is located in a flood zone, the Board adopts the Department's finding in its October 6, 2011 Order that the proposed project is unlikely to cause or increase flooding or cause an unreasonable flood hazard to any structure.

18. WETLAND IMPACTS:

Tetra Tech conducted the applicant's surveys to locate wetland and waterbody resources on the Saddleback Ridge Wind Project site and summarized the results of that work in Section 7 of the Site Law application and Section 6 of the NRPA application. Field surveys were conducted in expanded survey corridors encompassing the project area including: the proposed access road, the crane road located along the ridgeline, the turbine pads and the area around the pads, the electrical transmission corridor, the laydown area and the O&M building. The results of these surveys are summarized as follows:

- 101 wetlands were identified within the expanded field survey area. Of these wetlands, 58 were classified as palustrine emergent wetlands, 32 were classified as palustrine forested wetlands, and 11 were classified as palustrine scrub shrub wetlands.
- 18 streams were identified in the expanded field survey.
- One potentially significant vernal pool was identified in the expanded field survey, as discussed in Finding 8(A).

Freshwater Wetland Impacts. The applicant proposes to permanently fill five square feet of forested freshwater wetlands for the construction of both the access road and the crane road, and to temporarily alter 10,883 square feet of freshwater wetlands during the construction of the transmission line. All equipment involved with the construction of the transmission line will work on construction mats when in wetlands. The applicant also proposes to convert 41,616 square feet of forested wetlands to scrub shrub wetlands for operation of the transmission line. Maintenance of the transmission line right-of-way will be in done in accordance with the applicant's Vegetation Management Plan (VMP) which is included as section 8-1 of the NRPA application. A portion of the proposed transmission line crosses the Critical Terrestrial Habitat of the PSVP. The proposed alteration qualifies as a minimal impact activity under the Chapter 305 Permit by Rule standards for alteration of significant wildlife habitat as noted above.

Stream Impacts. The applicant proposes to cross four streams as defined by the NRPA during the construction of the proposed transmission line. During construction of the transmission line, the applicant proposes to utilize timber mat bridges to cross the streams.

Chapter 310 of the Department's rules interprets and elaborates on the NRPA criteria pertaining to wetlands and waterbodies, such as streams. The rules guide the Department in its determination of whether a project's impacts would be unreasonable. A proposed project would generally be found to be unreasonable if it would cause a loss of wetland area,

functions and values and there is a practicable alternative to the project that would be less damaging to the environment. Each application for a wetland alteration permit must provide an analysis of alternatives in order to demonstrate that a practicable alternative with less impact does not exist.

A. Avoidance. Tetra Tech prepared an alternatives analysis for the proposed project which was submitted as Section 7 of the NRPA application, an impact avoidance and minimization analysis which was submitted as Section 8, and a summary of resource impacts which was submitted as Section 9. These analyses address multiple factors that were considered in the selection of the site. These factors include quality of the wind resource, logistics of delivering power to market, compatibility with existing land uses, and environmental impacts. The application states that efforts to avoid wetland impacts in the planning of this project included utilizing existing roads where possible and siting the turbine pads, transmission line corridor and other project facilities to avoid and minimize resource impacts. Overall, the applicant proposes to permanently fill five square feet of freshwater wetlands during the construction of the entire project. There are no permanent stream crossings proposed. The transmission line right of way will cross nine streams. Construction activities will require temporary crossings of four of these streams, through the use of timber mat bridges. Approximately 41,616 square feet of forested freshwater wetlands will be permanently converted to scrub shrub wetlands with the installation and maintenance of the electrical transmission line.

B. Minimal Alteration. The amount of wetland and waterbodies to be altered must be kept to the minimum amount necessary for meeting the overall purpose of the project. In the areas where wetland impacts could not be avoided, the applicant minimized wetland impacts by using various techniques. Some techniques used to minimize impacts included narrowing road shoulders where possible and modifying cut and fill slopes on both roads and turbine pads. The applicant maximized buffers to allow larger riparian areas between roads and turbine pads and the wetland areas. The temporary stream crossings were sited to ensure that they minimized impacts to the streams.

C. Compensation. In accordance with Chapter 310 §5(C)(6)(a)(ii), compensation is not required for impacts associated with the proposed project, because the applicant is proposing to fill less than 15,000 square feet of freshwater wetland.

Based on the wetlands and waterbodies surveys and the proposed layout of the project as shown on plans submitted by the applicant, the Board adopts the Department's findings in its October 6, 2011 Order that the applicant has avoided and minimized wetland and waterbody impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project provided that the applicant implements the Vegetation Management Plan contained in the application.

19. AIR QUALITY:

The applicant stated that the project is not expected to have an adverse effect on air quality. Emissions from construction activities will include exhaust from construction vehicles and the use of a rock crusher.

The site will be monitored for dust control during construction. Dust is not anticipated to be a problem, as most of the project roads and pads will be covered with crushed stone. Calcium chloride or water will be used as needed to address any dust problems that may become a nuisance to neighboring properties or where safety and visibility are compromised. Treatment will be on an as-needed basis as ordered by the resident engineer.

The applicant proposes using a rock crusher on the project site during the construction of the proposed project and states that it will use a crusher which is licensed by the Department's Bureau of Air Quality and is operated in accordance with that license.

Based on the information submitted by the applicant, the Board adopts the Department's findings in its October 6, 2011 Order that no significant source of air emissions has been identified with the exception of the rock crusher and dust emissions as described above, and the proposals for limiting emissions are adequate.

20. ODORS:

The applicant stated that the clearing and construction phase of the proposed project will not create significant odors, other than from equipment exhaust. If burning of vegetation occurs, it will be under the supervision of an environmental or third-party inspector and will be accomplished in compliance with local and state open burning requirements.

Based on the information submitted by the applicant, the Board adopts the Department's findings in its October 6, 2011 Order that the proposed project will not be a significant source of odors.

21. WATER VAPOR:

The proposed project does not involve any significant sources of water vapor emissions.

22. ACCESS TO SUNLIGHT:

Chapter 375(13) recognizes that some existing structures utilize active or passive solar energy systems for purposes such as heating air or water, and that in those instances, it may be an unreasonable effect on existing uses to deny access to direct sunlight.

The applicant stated that no part of the proposed project will block access to direct sunlight for structures utilizing solar energy through active or passive systems.

Based on the information submitted by the applicant, the Board adopts the Department's findings in its October 6, 2011 Order that the proposed project will not have an unreasonable effect on any existing solar energy uses.

23. SHADOW FLICKER:

In accordance with 38 M.R.S. §484(10), an applicant must demonstrate that the proposed wind energy development has been designed to avoid unreasonable adverse shadow flicker effects. Shadow flicker caused by wind turbines is defined as alternating changes in light intensity caused by the moving blade casting shadows on the ground and stationary objects. Shadow flicker is the sun seen through a rotating wind turbine rotor. Shadow flicker does not occur when the sun is obscured by clouds or fog or when the turbine is not rotating. The spatial relationships between a wind turbine and receptor, as well as wind direction are key factors related to shadow flicker duration. At distances of greater than 1,000 feet between wind turbines and receptors, shadow flicker usually occurs where the rotor plane is in-line with the sun and receptor (as seen from the receptor), the cast shadows will be very narrow (blade thickness), of low intensity, and the shadows will move quickly past the stationary receptor. When the rotor plane is perpendicular to the sun-receptor "view line" the cast shadow of the blades will move within a circle equal to the turbine rotor diameter.

The applicant submitted a shadow flicker analysis as Section 26 of the application. This analysis was subsequently updated to reflect the modified turbine blades proposed for the project. The applicant utilized WindPRO, a wind modeling software program, to model expected shadow flicker effects on adjacent properties from the 12 proposed turbine locations. The applicant used historic sunshine data and wind data collected by the on-site meteorological tower. The applicant assumed the worst case scenario, that all receptors have a direct in-line view of the incoming shadow flicker sunlight. Further, the analysis does not take vegetative screening into account between a turbine and a receptor.

The Department generally recommends that an applicant conduct a shadow flicker model out to a distance of 1,000 feet or greater from a residential structure. As represented in Section 5, Table 2 of the application gives the distances between the nearest turbine and the location of nearby receptors. The residential structure identified in the applicant's study as the closest to a turbine is approximately 2,447 feet from the nearest turbine. The furthest receptor studied was approximately 5,465 feet from the nearest turbine. There were 31 potentially-impacted receptors identified in this range.

The applicant submitted an easement option on one adjacent parcel. This property is undeveloped and actively managed as a timber lot. The easement gives the applicant the right to place one turbine nearer than 1.5 times the turbine height but no closer than 350 feet from the boundary of the parcel, cast shadows or shadow flicker from the proposed wind project onto the parcel, and the right to have sound generated from the project impact the parcel.

Maine currently has no numerical regulatory limits on exposure to shadow flicker; however, the industry commonly uses 30 hours per year as a limit to reduce nuisance complaints. The

applicant's analysis of 31 potential shadow flicker receptors, using historical and on-site modeling assumptions, indicated potential exposures between zero and 14 hours, 21 minutes per year. The applicant stated that when vegetation is taken into consideration, actual impacts are expected to be less.

The Department found that the shadow flicker modeling conducted by the applicant is credible. Based upon the proposed project's location and design, the distance to the nearest shadow flicker receptor, and results of the shadow flicker analysis showing a maximum exposure of 14 hours, 21 minutes per year, the Board adopts the Department's finding in its October 6, 2011 Order that the proposed project will not unreasonably cause shadow flicker to occur over adjacent properties.

24. PUBLIC SAFETY:

The proposed project will use GE 2.75 MW wind turbine generators. The turbines have been certified by TUV NORD, a wind power product certification authority, to withstand Class IIB and IIIA wind gusts, as defined by the International Electrotechnical Commission Standard 61400-1 "Wind Turbine Generator Systems-Part 1: Safety Requirements." The Standard considers an extreme wind speed at hub height of 52.5 meters per second (117 miles per hour). The applicant submitted evidence that the GE 2.75 wind turbine meets acceptable international safety standards in the form of a Statement of Compliance issued by TUV NORD dated February 4, 2010.

The Department recognizes that locating wind turbines a safe distance away from any occupied structures, public road or other public use area is of utmost importance. In establishing a recommended safety setback, the Department considered industry standards for wind energy production in climates similar to Maine, as well as the guidelines recommended by certifying agencies such as Det Norske Veritas. Based on these sources, the Department recommends that all wind turbines be set back from property lines, occupied structures or public areas a minimum of 1.5 times the maximum blade height of the wind turbine. The maximum blade height of the GE 2.75-103 is approximately 448 feet from the ground to the tip of a fully extended turbine blade. Based on the Department's setback specifications, the minimum setback distance to the nearest property line should be 672 feet. A review of the application indicates that all of the turbines except Turbine #11 are setback an adequate distance from the property boundaries. Turbine #11 is located 388 feet from the closest property boundary. The parcel abutting Turbine #11 is a large, actively managed timber lot. As described in Section 23 above, the applicant has submitted an option for an easement on this parcel to provide the necessary safety setback for Turbine #11. The easement option indicates that the property owner does not object to the placement of a turbine closer than 1.5 times the turbine height from the property boundary. All other safety setbacks will be met on the applicant's own parcel.

Interested persons have argued that wind turbines pose a risk of fire which could pose an unreasonable safety risk. The applicable laws and rules under which the Department has reviewed this project have no specific criteria addressing fire safety; however, the applicant has stated that there have been only three confirmed fires among 16,000 operating 1.5 and

2.5 MW GE turbines, and none of these resulted in significant fires that spread outside the turbine area. The applicant further states that there have been no reported fires on 2.5 to 2.75 MW GE turbines. The applicant also states it intends to monitor the turbines continuously, and coordinate with local authorities in the unlikely event of fire. The Department found no evidence of a public safety risk from fire related to the proposed turbines.

Based on the information submitted by the applicant, the Board adopts the Department's findings in its October 6, 2011 Order that the applicant has provided documentation in the form of standards of compliance by the manufacturer and certification by an engineer that the wind generation equipment has been designed to conform to applicable industry safety standards and has demonstrated that the proposed development has been sited such that it will not present an unreasonable safety hazard to adjacent properties or adjacent property uses. The Department further found that the applicant submitted sufficient evidence which demonstrates that the proposed project has been sited with appropriate safety related setbacks from adjacent properties and existing uses provided that prior to project construction, the applicant submits a copy of the recorded easement to the Department.

25. DECOMMISSIONING PLAN:

The proposed wind turbine generators are designed and certified by independent agencies for a minimum expected operational life of 20 years. In order to facilitate and ensure appropriate removal of the wind generation equipment when it reaches the end of its useful life, the Department requires an applicant to demonstrate, in the form of a decommissioning plan, the means by which decommissioning will be accomplished. The applicant submitted a decommissioning plan as Section 29 of the application. The decommissioning plan includes a description of the trigger for implementing the decommissioning, a description of work required, an estimate of decommissioning costs, a schedule for contributions to its decommissioning fund and a demonstration of financial assurance.

A. Description of trigger for implementation of decommissioning. The applicant stated that the wind generation facility will be decommissioned when it ceases to generate electricity for a continuous period of twelve months. In the case of a force majeure event which is the cause of the project not generating electricity for 12 months the applicant may submit to the Department for review and approval reasonable evidence in support of a request that it not be required to decommission the project at that time.

B. Description of work. The description of work contained in Section 29 of the application outlines how the turbines and other components of the proposed project will be dismantled and removed from the site. Subsurface components will be removed to a minimum of 24 inches below grade, facilities will be removed and salvaged, and disturbed areas will be re-seeded. At the time of decommissioning, the applicant must submit a plan for continued beneficial use of any wind energy development component proposed to be left on-site to the Department for review and approval.

C. Cost estimates for decommissioning. The applicant stated that the total cost of decommissioning, minus salvage value, is estimated to be $558,444. A detailed breakdown of decommissioning costs is included in Section 29 of the application.

D. Financial assurance. The applicant proposed that it will ensure that financial assurance for decommissioning costs will be fully established by year 13 of operation. In addition, prior to year 13, the applicant will provide increasing levels of financial assurance according to the schedule outlined below in Table 2.

The applicant proposes to provide financial assurance in the form of a performance bond, surety bond, letter of credit or other acceptable form of financial guarantee. The initial financial assurance level of 20% will be in place prior to the commercial operation date and will be increased by 20% of the estimated total costs every three years until the financial assurance level reaches 100% of the total project decommissioning costs. The applicant stated that financial assurance will be in place at all times during the operation of the project according to the table below. The applicant proposes to reassess the estimated total decommissioning costs (decommissioning costs minus salvage value) prior to the end of years 6, 12, 18, 20 and each year thereafter. The updated estimated total decommissioning costs will be submitted to the Department for review and approval and the financial assurance will be adjusted to cover 100% of the revised total decommissioning costs.

Table 2.

Year of Operation	Financial Assurance Level % of total project Decommissioning costs	Reassess Total Project Decommissioning Cost at end of period
1 –3	20%	-
4 – 6	40%	Yes
7 – 9	60%	-
10 – 12	80%	Yes
13 – 15	100%	-
16 – 18	100%	Yes
19 - 20	100%	Yes
21- end of life	100%	Every year

The applicant proposed to make the Department the obligee of any performance bond used to prove financial assurance. The Department will have the right to call the bond in the event of non-performance. The trigger for the Department's third party rights will be the dissolution of the project's owner or if the project ceases to generate electricity for a continuous period of twelve months, as described in (1) above, and the failure of the licensee to perform its decommissioning obligations under this permit. Upon decommissioning the site any remaining balance of the financial assurance will be returned to the applicant.

Based on the applicant's proposal outlined above, and in consideration of comments from interested persons, the Board adopts the Department's finding in its October 6, 2011 Order

that the applicant has made adequate provisions for demonstrating a decommissioning plan and a mechanism to execute the plan provided that the plan is implemented and that salvage values are reassessed every time the decommissioning costs are estimated in accordance with the schedule in Table 2 above.

26. TANGIBLE BENEFITS:

The applicant submitted a description of the tangible benefits to be provided by the Saddleback Ridge Wind Project as Section 28 of the application. In that description the applicant describes tangible benefits that the project will provide to the State of Maine and to the host community of Carthage, including economic benefits and environmental benefits. The applicant stated that the project is expected to be assessed at approximately $66 million, providing tax revenue to the host community.

The applicant stated that the host community will also benefit through employment opportunities, the local purchase of materials and supplies, taxes paid on the project, and a proposed annual Community Benefit Fund payment. The applicant described the employment benefits in part as follows:

> "On average, the Project would employ 60 to 70 construction workers for five to six months and up to 100 workers during peak construction times. Materials located close to the site will be used as much as possible, giving local stone quarries and construction material suppliers procurement opportunities. In addition, local businesses such as motels, restaurants, gas stations, and retail stores will see increases in activity during construction. After construction is complete, the Project will employ a maintenance staff of two to three full-time workers. There will also be a need for ongoing road maintenance, plowing, and landscaping services."

The applicant also stated that the project will increase energy diversity, thereby helping to reduce electric price volatility in Maine. The applicant stated that the project will help Maine meet its commitments under the Regional Greenhouse Gas Initiative, which establishes limits for emissions associated with the generation of electricity, and that it will have the capacity to provide enough emission-free energy to power more than 16,000 Maine households annually, with no air or water pollution and with no greenhouse gas emissions, a leading cause of global warming.

Community Benefits Fund. The applicant has agreed with the Town of Carthage to establish a Community Benefits Fund. This fund would be used at the Town's discretion to provide direct economic benefits to its citizens. The applicant's proposed contribution to the community benefit fund will be at least $4,000 per turbine per year for the life of the project and will be administered by the Town of Carthage. The applicant states that the size of this fund may increase subject to availability of project resources. The Town of Carthage submitted a letter to the Department dated February 21, 2011, accepting the proposed community benefit fund.

Recreation Donation. The applicant initially proposed to donate $60,000 to the Maine Bureau of Parks and Lands for a new playground at the beach and campground near Webb Lake in Mount Blue State Park. In comments dated December 9, 2010, the Department of Agriculture, Conservation, and Forestry, Bureau of Parks and Lands (BPL) noted that this proposal is above and beyond the minimum requirements of the law. BPL further stated that since negotiating the agreement, other potential funds have been identified for the playground so the donation should be restructured as a more general contribution to BPL, or more specifically for land acquisition in the vicinity of Mount Blue State Park.

Interested persons contend that the tangible benefits of the project are inadequate and specifically the donation to BPL is inadequate to compensate for the impacts to public views from the park. As noted in Section 7 above, views of the project from the park will be at distances of from 5.5 to over 8 miles. The Department's scenic consultant commented that the scenic impact to views from the park would be in the low-to-medium range or lower.

In response to the Department's September 27, 2011 draft order, interested persons raised questions about the proposed donation to BPL. BPL reviewed the draft order and stated that it still intends to accept the contribution from the developer for land protection efforts in this area.

The Board reviewed the concerns expressed by interested persons. Based upon consideration of all of the benefits proposed by the applicant, information in the record, and interested persons' comments, the Board reiterates the findings and conclusions pertaining to tangible benefits in its February 18, 2012 decision on appeal, and adopts the Department's finding that the applicant has demonstrated that the proposed project will provide significant tangible benefits to the host community and surrounding area pursuant to 35-A M.R.S. §3454, provided that annual payments are made to the Town of Carthage and that prior to the start of construction a one-time $60,000 payment is made to the Maine Bureau of Parks and Lands for land acquisition projects in the area of Mount Blue State Park.

BASED on the above findings of fact, and subject to the conditions listed below, the Board makes the following conclusions pursuant to 38 M.R.S. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act:

A. The proposed activity will not unreasonably interfere with existing recreational or navigational uses. The proposed activity will not significantly compromise views from a SRSNS and will not have an unreasonable adverse effect on scenic character and existing uses related to scenic character. The proposed activity will not unreasonably interfere with existing scenic and aesthetic uses.

B. The proposed activity will not cause unreasonable erosion of soil or sediment.

C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life provided that the applicant submits a post-construction monitoring program, and that the applicant performs post-construction avian, bat and raptor monitoring at six turbine locations.

E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.

F. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters.

G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.

H. The proposed activity is not on or adjacent to a sand dune.

I. The proposed activity is not on an outstanding river segment as noted in 38 M.R.S. Section 480-P.

BASED on the above findings of fact, and subject to the conditions listed below, the Board makes the following conclusions pursuant to 38 M.R.S. Sections 481 et seq. and 35-A M.R.S. Sections 3451 et seq.:

A. The applicant has provided adequate evidence of title, right or interest, financial capacity and technical ability to develop the project in a manner consistent with state environmental standards provided that, prior to the start of construction, (1) the applicant submits copies of the recorded deeds for property currently under purchase options and of the executed transmission easement as described in Finding 3; and of the executed sound, shadow flicker and public safety easements as described in Findings 6, 23 and 24; and (2) the applicant submits evidence that it has secured financing for the project as described in Finding 4.

B. The proposed activity will not significantly compromise views from a SRSNS and will not have an unreasonable adverse effect on scenic character or existing uses related to scenic character of the resource. The development will not adversely affect existing uses, air quality, water quality or other natural resources in the municipality or in neighboring municipalities provided that the applicant submits the sound compliance locations for review and approval to the Department prior to the commencement of operation of the facility, that the applicant implements the complaint protocol outlined above prior to operation of the facility, and that the applicant submits sound level monitoring reports in accordance with the post-construction monitoring program, all as described in Finding 6; provided that the applicant complies with the post-construction VMP, and all visual screening buffers and stormwater treatment buffers are marked on the ground as described in Finding 10; and provided all required deed restrictions are recorded and

copies of the recorded deed restrictions, including the plot plans, are submitted as described in Finding 12.

C. The proposed development will be built on soil types which are suitable to the nature of the undertaking and will not cause unreasonable erosion of soil or sediment nor inhibit the natural transfer of soil provided that the applicant submits a final plan for pre-blast surveys and well monitoring as described in Finding 11.

D. The proposed development meets the standards for stormwater management in Section 420-D and the standard for erosion and sedimentation control in Section 420-C provided that the applicant holds a pre-construction meeting, hires a third-party inspector to oversee project construction, adheres to the required protocol for inspections of the ditch turnouts and treatment berms, permanently marks buffers on the ground and submits a copy of the recorded deed restrictions, all as described in Finding 12.

E. The proposed development will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur provided that the applicant submits a site drawing showing the location of the O&M building well and confirming the wastewater disposal field location as described in Finding 13.

F. The applicant has made adequate provision of utilities, including water supplies, sewerage facilities, solid waste disposal and roadways required for the development and the development will not have an unreasonable adverse effect on the existing or proposed utilities and roadways in the municipality or area served by those services.

G. The proposed development will not unreasonably cause or increase the flooding of the alteration area or adjacent properties nor create an unreasonable flood hazard to any structure.

H. The proposed development will not unreasonably cause shadow flicker effects to occur over adjacent properties.

I. The proposed development will not present an unreasonable safety hazard to adjacent properties or adjacent property uses.

J. The applicant has made adequate provision to achieve decommissioning of the wind power facility provided the decommissioning plan is implemented as described in Finding 25 and financial assurance of funds for decommissioning is demonstrated as set forth in Finding 25.

K. The proposed development will provide significant tangible benefits to the host community and surrounding area, provided that the applicant implements the Community Benefit Fund described in Finding 26 and makes a one-time contribution of $60,000 to the Bureau of Parks and Lands.

THEREFORE, the Board APPROVES the application of SADDLEBACK RIDGE WIND LLC to construct a 33 MW wind energy development project, known as Saddleback Ridge Wind Project, located in the Towns of Carthage, Canton and Dixfield, as described above, SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations:

1. The Standard Conditions of Approval, a copy attached.

2. In addition to any specific erosion control measures described in this order, the applicant shall take all necessary actions to ensure that its activities or those of its agents do not result in noticeable erosion of soils or fugitive dust emissions on the site during the construction and operation of the project covered by this approval.

3. Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

4. The applicant or other responsible party shall, within three months of the expiration of each five-year interval from the date of this Order, submit a report certifying that the items listed in Department Rules, Chapter 500, Appendix B(4) have been completed in accordance with the approved plans.

5. Prior to the start of construction, the applicant shall provide copies of the recorded deeds for the two properties currently under purchase options and three executed easements for the transmission line corridor, and one executed sound and public safety setback easement to the Department for review.

6. Prior to the start of construction, the applicant shall submit evidence that it has secured final financing for the project in accordance with 38 M.R.S. §484(1) and Chapter 373(1), to the Bureau of Land and Water Quality for review and approval.

7. Prior to the commencement of operation, the applicant shall submit the sound level compliance locations to the Bureau of Land and Water Quality for review and approval.

8. Prior to the commencement of operation, the applicant shall implement the sound level complaint response protocol as outlined in Finding 6(H). The applicant shall maintain a toll free noise complaint hotline 24 hours a day, 7 days per week. The hotline number shall be clearly noticed to all abutters, posted in prominent locations around the project site and at the Municipal Offices. For those complaints that include sufficient information to warrant an investigation, the applicant must, within two business days of receipt of the complaint, collect the complainant information (name, location, time of complaint and other complaint information) and the meteorological and operational data from the project at the time of the complaint, and submit that information to the Department and the complainant. At the Department's request, the applicant shall plot complaint locations and key information on a project area map to evaluate complaints for a consistent pattern of site, operating and weather conditions; and submit this analysis to

the Department with a comparison of these patterns to the compliance protocol outlined above to determine whether testing under additional site and operating conditions is necessary and if so, shall propose a testing plan that addresses the locations and the conditions under which the pattern of complaints has occurred. The applicant shall be responsible to reimburse the Department for all costs incurred by the Department in the review of any noise related complaint.

9. The applicant shall submit sound level monitoring reports in accordance with the post-construction monitoring program described in Finding 6. If the Department finds that the project is not in compliance with this Order, the applicant shall take short term action immediately to adjust operations to reduce sound output to acceptable levels under the terms and conditions herein. Within 60 days of a determination of non-compliance by the Department, the applicant shall submit, for review and approval, a compliance plan that proposes actions to bring the project into compliance at all protected locations affected by the project.

10. The applicant shall develop a plan for monitoring post-construction avian, bat, and raptor mortality due to project operation in consultation with the Department and the Maine Department of Inland Fisheries and Wildlife. Prior to the commencement of operation of the project, the applicant shall submit the final plan to the Department for review and approval.

11. The applicant shall perform post-construction avian, bat and raptor mortality monitoring in accordance with the plan approved pursuant to Special Condition #10 of this Order and shall submit reports to the Department in accordance with the schedule established in the plan.

12. All in-stream work shall be conducted between July 15 and October 1.

13. The applicant shall comply with the post-construction Vegetation Management Plan submitted with the application.

14. The applicant shall retain the services of a third-party inspector in accordance with the Special Condition for Third-Party Inspection Program, which is attached to this Order.

15. Prior to the start of construction, the applicant shall conduct a pre-construction meeting. This meeting shall be attended by the applicant's representative, Department staff, the design engineer, the contractor, and the third-party inspector.

16. Prior to the commencement of operation, the applicant shall execute and record all required deed restrictions with the Registry of Deeds, including the appropriate buffer (stormwater) deed restrictions, all with attached plot plans, drawn to scale.

17. Prior to the start of construction, the location of all buffers (including natural resource buffers and stormwater buffers) shall be clearly marked in the field using durable signs and/or flagging plainly visible to construction personnel. The location of protective

buffers shall be marked on construction drawings and restrictions within these buffers shall be explained during the pre-construction meeting with the contractor. The applicant's environmental inspector will be responsible for ensuring signs and other buffer indicators are maintained and visible to construction personnel during the construction phase of the project. Locations of protective buffers will be permanently marked on the ground following the construction phase of the project.

18. Prior to any blasting on the site, the applicant shall submit a plan for a pre-blast survey identifying any structures within 2,000 feet and any active wells within 3,500 feet of any blasting area, to the Department for review and approval. Owners of active wells shall be notified of the opportunity to enroll in a well monitoring program as described in Finding 11. The applicant shall submit a consultation draft to the Department for review prior to the submittal of the final plan.

19. Prior to the commencement of operation, the applicant shall submit an operational SPCC plan to the Department for review.

20. The applicant shall retain the services of a professional engineer to inspect the construction and stabilization of the stone bermed level spreaders and road ditch turnouts. The applicant shall submit the inspecting engineer's report and notify the Department within 14 days of completion of the stone bermed level spreaders and turnouts.

21. Within 60 days of the installation of the well and wastewater disposal field, the applicant shall submit a site drawing showing the location of both the O&M building well and the wastewater disposal field and a statement confirming that they were constructed at the approved location.

22. The applicant shall make annual payments, to the Town of Carthage in accordance with the terms of the Community Benefit Fund.

23. Prior to commencement of project operation the applicant shall make a contribution of $60,000 to the Department of Agriculture, Conservation, and Forestry, Bureau of Parks and Lands, for land acquisition projects in the vicinity of Mount Blue State Park.

24. The applicant shall execute the decommissioning plan as described in Finding 25 and the salvage values shall be reassessed every time the decommissioning costs are estimated in accordance with Table 2 of this Department Order.

DONE AND DATED IN AUGUSTA, MAINE, THIS 7th DAY OF November, 2013.

BOARD OF ENVIRONMENTAL PROTECTION

BY: Robert Foley
Robert Foley, Chairman

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES...

ET/L#25137HNIN/ATS#76232 & 76233

Department of Environmental Protection

SITE LOCATION OF DEVELOPMENT (SITE) STANDARD CONDITIONS

A. **Approval of Variations from Plans**. The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation. Further subdivision of proposed lots by the applicant or future owners is specifically prohibited without prior approval of the Board, and the applicant shall include deed restrictions to that effect.

B. **Compliance with All Applicable Laws**. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. **Compliance with All Terms and Conditions of Approval**. The applicant shall submit all reports and information requested by the Board or the Department demonstrating that the applicant has complied or will comply with all preconstruction terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.

D. **Advertising**. Advertising relating to matters included in this application shall refer to this approval only if it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.

E. **Transfer of Development**. Unless otherwise provided in this approval, the applicant shall not sell, lease, assign or otherwise transfer the development or any portion thereof without prior written approval of the Board where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval shall be granted only if the applicant or transferee demonstrates to the Board that the transferee has the technical capacity and financial ability to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant.

F. **Time frame for approvals.** If the construction or operation of the activity is not begun within four years, this approval shall lapse and the applicant shall reapply to the Board for a new approval. The applicant may not begin construction or operation of the development until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

G. **Approval Included in Contract Bids.** A copy of this approval must be included in or attached to all contract bid specifications for the development.

H. **Approval Shown to Contractors**. Work done by a contractor pursuant to this approval shall not begin before the contractor has been shown by the developer a copy of this approval.

Natural Resource Protection Act (NRPA)
Standard Conditions

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCE PROTECTION ACT, TITLE 38, M.R.S.A. SECTION 480-A ET.SEQ. UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. Time frame for approvals. If construction or operation of the activity is not begun within four years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

F. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

G. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

H. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

Revised (4/92) DEP LW0428

STORMWATER STANDARD CONDITIONS

STRICT CONFORMANCE WITH THE STANDARD AND SPECIAL CONDITIONS OF THIS APPROVAL IS NECESSARY FOR THE PROJECT TO MEET THE STATUTORY CRITERIA FOR APPROVAL

Standard conditions of approval. Unless otherwise specifically stated in the approval, a department approval is subject to the following standard conditions pursuant to Chapter 500 Stormwater Management Law.

(1) Approval of variations from plans. The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents must be reviewed and approved by the department prior to implementation. Any variation undertaken without approval of the department is in violation of 38 M.R.S.A. §420-D(8) and is subject to penalties under 38 M.R.S.A. §349.

(2) Compliance with all terms and conditions of approval. The applicant shall submit all reports and information requested by the department demonstrating that the applicant has complied or will comply with all terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.

(3) Advertising. Advertising relating to matters included in this application may not refer to this approval unless it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.

(4) Transfer of project. Unless otherwise provided in this approval, the applicant may not sell, lease, assign, or otherwise transfer the project or any portion thereof without written approval by the department where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval may only be granted if the applicant or transferee demonstrates to the department that the transferee agrees to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant. Approval of a transfer of the permit must be applied for no later than two weeks after any transfer of property subject to the license.

(5) Time frame for approvals. If the construction or operation of the activity is not begun within four years, this approval shall lapse and the applicant shall reapply to the department for a new approval. The applicant may not begin construction or operation of the project until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

(6) Certification. Contracts must specify that "all work is to comply with the conditions of the Stormwater Permit." Work done by a contractor or subcontractor pursuant to this approval may not begin before the contractor and any subcontractors have been shown a copy of this approval with the conditions by the developer, and the owner and each contractor and subcontractor has certified, on a form provided by the department, that the approval and

conditions have been received and read, and that the work will be carried out in accordance with the approval and conditions. Completed certification forms must be forwarded to the department.

(7) Maintenance. The components of the stormwater management system must be adequately maintained to ensure that the system operates as designed, and as approved by the department.

(8) Recertification requirement. Within three months of the expiration of each five-year interval from the date of issuance of the permit, the permittee shall certify the following to the department.

(a) All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.

(b) All aspects of the stormwater control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the facilities.

(c) The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the department, and the maintenance log is being maintained.

(9) Severability. The invalidity or unenforceability of any provision, or part thereof, of this permit shall not affect the remainder of the provision or any other provisions. This permit shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

November 16, 2005 (revised December 27, 2011)

Special Condition
for
Third Party Inspection Program

THIRD-PARTY INSPECTION PROGRAM

1.0 THE PURPOSE OF THE THIRD-PARTY INSPECTION

As a condition of this permit, the Maine Department of Environmental Protection (MDEP) requires the permit applicant to retain the services of a third-party inspector to monitor compliance with MDEP permit conditions during construction. The objectives of this condition are as follows:

1) to ensure that all construction and stabilization activities comply with the permit conditions and the MDEP-approved drawings and specifications,

2) to ensure that field decisions regarding erosion control implementation, stormwater system installation, and natural resource protection are based on sound engineering and environmental considerations, and

3) to ensure communication between the contractor and MDEP regarding any changes to the development's erosion control plan, stormwater management plan, or final stabilization plan.

This document establishes the inspection program and outlines the responsibilities of the permit applicant, the MDEP, and the inspector.

2.0 SELECTING THE INSPECTOR

At least 30 days prior to starting any construction activity on the site, the applicant will submit the names of at least two inspector candidates to the MDEP. Each candidate must meet the minimum qualifications listed under section 3.0. The candidates may not be employees, partners, or contracted consultants involved with the permitting of the project or otherwise employed by the same company or agency except that the MDEP may accept subcontractors who worked for the project's primary consultant on some aspect of the project such as, but not limited to, completing wetland delineations, identifying significant wildlife habitats, or conducting geotechnical investigations, but who were not directly employed by the applicant, as Third Party inspectors on a case by case basis. The MDEP will have 15 days from receiving the names to select one of the candidates as the inspector or to reject both candidates. If the MDEP rejects both candidates, then the MDEP shall state the particular reasons for the rejections. In this case, the applicant may either dispute the rejection to the Director of the Bureau of Land and Water Quality or start the selection process over by nominating two, new candidates.

3.0 THE INSPECTOR'S QUALIFICATIONS

Each inspector candidate nominated by the applicant shall have the following minimum qualifications:

1) a degree in an environmental science or civil engineering, or other demonstrated expertise,

2) a practical knowledge of erosion control practices and stormwater hydrology,

3) experience in management or supervision on large construction projects,

4) the ability to understand and articulate permit conditions to contractors concerning erosion control or stormwater management,

5) the ability to clearly document activities being inspected,

6) appropriate facilities and, if necessary, support staff to carry out the duties and responsibilities set forth in section 6.0 in a timely manner, and

7) no ownership or financial interest in the development other than that created by being retained as the third-

party inspector.

4.0 INITIATING THE INSPECTOR'S SERVICES

The applicant will not formally and finally engage for service any inspector under this permit condition prior to MDEP approval or waiver by omission under section 2.0. No clearing, grubbing, grading, filling, stockpiling, or other construction activity will take place on the development site until the applicant retains the MDEP-approved inspector for service.

5.0 TERMINATING THE INSPECTOR'S SERVICES

The applicant will not terminate the services of the MDEP-approved inspector at any time between commencing construction and completing final site stabilization without first getting written approval to do so from the MDEP.

6.0 THE INSPECTOR'S DUTIES AND RESPONSIBILITIES

The inspector's work shall consist of the duties and responsibilities outlined below.

1) Prior to construction, the inspector will become thoroughly familiar with the terms and conditions of the state-issued site permit, natural resources protection permit, or both.

2) Prior to construction, the inspector will become thoroughly familiar with the proposed construction schedule, including the timing for installing and removing erosion controls, the timing for constructing and stabilizing any basins or ponds, and the deadlines for completing stabilization of disturbed soils.

3) Prior to construction, the inspector will become thoroughly familiar with the project plans and specifications, including those for building detention basins, those for installing the erosion control measures to be used on the site, and those for temporarily or permanently stabilizing disturbed soils in a timely manner.

4) During construction, the inspector will monitor the contractor's installation and maintenance of the erosion control measures called for in the state permit(s) and any additional measures the inspector believes are necessary to prevent sediment discharge to off-site properties or natural resources. This direction will be based on the approved erosion control plan, field conditions at the time of construction, and the natural resources potentially impacted by construction activities.

5) During construction, the inspector will monitor the contractor's construction of the stormwater system, including the construction and stabilization of ditches, culverts, detention basins, water quality treatment measures, and storm sewers.

6) During construction, the inspector will monitor the contractor's installation of any stream or wetland crossings.

7) During construction, the inspector will monitor the contractor's final stabilization of the project site.

8) During construction, the inspector will keep logs recording any rain storms at the site, the contractor's activities on the site, discussions with the contractor(s), and possible violations of the permit conditions.

9) During construction, the inspector will inspect the project site at least once a week and before and after any significant rain event. The inspector will photograph all protected natural resources both before and after construction and will photograph all areas under construction. All photographs will be identified with, at a minimum the date the photo was taken, the location and the name of the individual taking the photograph. *Note: the frequency of these inspections as contained in this condition may be varied to best address particular project needs.*

10) During construction, the inspector will prepare and submit weekly *(or other frequency)* inspection reports to

the MDEP.

11) During construction, the inspector will notify the designated person at the MDEP immediately of any sediment-laden discharges to a protected natural resource or other significant issues such as the improper construction of a stormwater control structure or the use of construction plans not approved by the MDEP.

7.0 INSPECTION REPORTS

The inspector will submit weekly written reports *(or at another designated frequency)*, including photographs of areas that are under construction, on a form provided by the Department to the designated person at the MDEP. Each report will be due at the MDEP by the Friday *(or other designated day)* following the inspection week (Monday through Sunday).

The weekly report will summarize construction activities and events on the site for the previous week as outlined below.

1) The report will state the name of the development, its permit number(s), and the start and end dates for the inspection week (Monday through Sunday).

2) The report will state the date(s) and time(s) when the inspector was on the site making inspections.

3) The report will state the date(s) and approximate duration(s) of any rainfall events on the site for the week.

4) The report will identify and describe any erosion problems that resulted in sediment leaving the property or sediment being discharged into a wetland, brook, stream, river, lake, or public storm sewer system. The report will describe the contractor's actions to repair any damage to other properties or natural resources, actions to eliminate the erosion source, and actions to prevent future sediment discharges from the area.

5) The report will list the buildings, roads, parking lots, detention basins, stream crossings or other features open to construction for the week, including those features or areas actively worked and those left unworked (dormant).

6) For each area open to construction, the report will list the date of initial soil disturbance for the area.

7) For each area open to construction, the report will note which areas were actively worked that week and which were left dormant for the week. For those areas actively worked, the report will briefly state the work performed in the area that week and the progress toward final stabilization of the area -- e.g. "grubbing in progress", " grubbing complete", "rough grading in progress", "rough grading complete", "finish grading in progress", "finish grading complete", "permanent seeding completed", "area fully stable and temporary erosion controls removed", etc.

8) For each area open to construction, the report will list the erosion and sedimentation control measures installed, maintained, or removed during the week.

9) For each erosion control measure in-place, the report will note the condition of the measure and any maintenance performed to bring it to standard.

Third Party Inspection Form

This report is prepared by a Third Party Inspector to meet the requirements of the Third Party Inspector Condition attached as a Special Condition to the Department Order that was issued for the project identified below. The information in this report/form is not intended to serve as a determination of whether the project is in compliance with the Department permit or other applicable Department laws and rules. Only Department staff may make that determination.

TO: *PM, Maine DEP (@maine.gov)*	FROM:
PROJECT NAME/ LOCATION:	DEP #:
DATE OF INSPECTION:	DATE OF REPORT:
WEATHER:	CONDITIONS:

SITE CHARACTERISTICS:

# ACRES OPEN:	# ACRES ACTIVE:	# ACRES INACTIVE:
LOCATION OF OPEN LAND:	LOCATION OF ACTIVE LAND:	LOCATION OF INACTIVE LAND:
OPEN SINCE:	OPEN SINCE:	OPEN SINCE:

PROGRESS OF WORK:

INSPECTION OF:	**Satisfactory**	**Minor Deviation** (corrective action required)	**Unsatisfactory** (include photos)
STORMWATER CONTROL (VEGETATIVE & STRUCTURAL BMP'S)			
EROSION & SEDIMENTATION CONTROL (TEMPORARY & PERMANENT BMP'S)			
OTHER: (PERMIT CONDITIONS, ENGINEERING DESIGN, ETC.)			

COMMENTS/CORRECTIVE ACTIONS TAKEN (attach additional sheets as necessary):

Photos (must be labeled with date, photographer and location):

Cc:		
Original and all copies were sent by email only.		

DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: March 2012 **Contact: (207) 287-2811**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's ("DEP") Commissioner: (1) in an administrative process before the Board of Environmental Protection ("Board"); or (2) in a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S.A. §3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S.A. §480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S.A. §636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This INFORMATION SHEET, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S.A. §§341-D(4) & 346, the *Maine Administrative Procedure Act*, 5 M.R.S.A. §11001, and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 CMR 2 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days of the date on which the Commissioner's decision was filed with the Board will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by the Board's receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner a copy of the appeal documents and if the person appealing is not the applicant in the license proceeding at issue the applicant must also be sent a copy of the appeal documents. All of the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time submitted:

1. *Aggrieved Status.* The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing on the appeal is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
7. *New or additional evidence to be offered.* The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court, see 38 M.R.S.A. §346(1); 06-096 CMR 2; 5 M.R.S.A. §11001; & M.R. Civ. P 80C. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. Failure to file a timely appeal will result in the Board's or the Commissioner's decision becoming final.

An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S.A. §346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452 or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.